University of Minnesota Duluth

2018-19 UNDERGRADUATE CATALOG

This file serves as an official record of University, college, and program requirements and policies during a specific time period. It includes a directory of undergraduate programs, majors, and course descriptions. It also includes a list of University policies.

NOTE: The information in this catalog is subject to change without notice. Colleges and departments make changes in their degree requirements and course descriptions frequently. For the most current information, check with department offices, advisers, and visit the Online Catalog at www.catalogs.umn.edu.

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Duluth Campus
African and African American Studies Minor
Anthropology, Sociology & Criminology
College of Liberal Arts

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 18 to 20

This minor is an interdisciplinary program designed to promote a vigorous understanding of the worldwide historical and current experience of African Americans and people of African descent. Through its pedagogical offerings, research activities, advocacy, and community and civic engagements, the program aims to promote awareness and the advancement of the cultures and institutions of African American and African cultural communities at the local, state, national, and international levels. The courses are structured to provide a vast array of interdisciplinary, intellectual, and academic approaches to research, interpretation, and the dissemination of the multifaceted experiences and realities of the total Black global experience. The program leads initiatives to develop a seamless and tightly woven cross-disciplinary pedagogical and scholastic structure focusing on the study of African American, African, and Caribbean community life and development in the United States and the world at-large. The program, through courses, advising, seminars, lectures, and presentations, supports the academic and intellectual growth of students in an ever increasing multicultural and diverse world.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

**Required Courses (6 cr)**
- AAAS 1103 - Introduction to Africa [GLOBAL PER] (3.0 cr)
- AAAS 1104 - Introduction to Black America [CDIVERSITY] (3.0 cr)

**AAAS Elective (3 cr)**
- AAAS 1101 - Introduction to Black Caribbean Studies [LE CAT6, LEIP CAT06] (3.0 cr)
- or AAAS 1102 - Introduction to Atlantic Slave Trade [LE CAT7, LECD CAT07, CDIVERSITY] (3.0 cr)

**Other Electives (9-11 cr)**
Take 9 - 11 credit(s) from the following:
- AAAS 3005 - Roots and Rebellion: Study Abroad in Jamaica [GLOBAL PER] (3.0 cr)
- AAAS 3091 - Independent Study (1.0 - 3.0 cr)
- AAAS 3095 - Special Topics: (Various Titles to be Assigned) (3.0 cr)
- AAAS 3201 - The African American Family (3.0 cr)
- AAAS 3202 - African Story-Telling and Folklore (3.0 cr)
- AAAS 3304 - Social Inequalities in Education (3.0 cr)
- AAAS 3305 - African American Cinema (3.0 cr)
- CRIM 4340 - Race, Crime and Justice (3.0 cr)
- ENGL 1583 - Introductory Study of Major Topics in Contemporary African Literature [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)
- ENGL 3573 - Survey of African American Literature [HUMANITIES, CDIVERSITY] (4.0 cr)
- ENGL 3574 - Reconstituting the Past in African Diaspora Literature (4.0 cr)
- HIST 2515 - Ancient to Pre-Modern African History [LE CAT7, LECD CAT07, HUMANITIES] (4.0 cr)
- HIST 3318 - Slavery, Lincoln and the Civil War (4.0 cr)
- HIST 3615 - Modern Africa (4.0 cr)
- HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
- MU 1005 - Jazz Studies [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
- MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
- MU 2005 - African Roots of American Music [LE CAT9, LECD CAT09, FINE ARTS] (3.0 cr)
- PHIL 3025 - Philosophy of Race and Racism (4.0 cr)
- POL 3525 - African Politics (3.0 cr)
- SOC 3330 - The American Civil Rights Movement [SOC SCI, CDIVERSITY] (3.0 cr)
- SOC 4949 - Race and Ethnic Relations (3.0 cr)
- SOC 4981 - Social Movements, Protest and Change (4.0 cr)
• **WS 2101** - Women, Race, and Class [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
• **WS 3750** - Voices of African Women [GLOBAL PER] (3.0 cr)
Duluth Campus
American Indian Studies B.A.
American Indian Studies
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 40
- Degree: Bachelor of Arts

American Indian Studies (AIS) is an interdisciplinary academic department offering coursework committed to broadening knowledge of the worldview, histories, languages, literatures, cultures, arts, and contemporary experiences of American Indian nations and peoples. As American Indian nations maintain a distinct political relationship with the federal government rooted in historical treaties, congressional laws, and executive orders, AIS promotes an awareness for and understanding of tribal sovereignty and self-determination. AIS strives to protect the integrity and identity of the indigenous population of North America and to create an intellectual learning environment conducive to critical and creative thought.

A degree in American Indian studies is designed to give students a broad background while allowing concentrated study in an area(s) of interest. The core of the program includes study in Ojibwe language, historical and contemporary foundations, politics and law, art and literature, and societies and cultures. Majors and minors develop skills in analytical and critical thinking, as well as verbal and written communication. They acquire knowledge of historical and contemporary American Indian experiences, cultures, and (inter)governmental affairs. Additionally, students may focus their area of study in Ojibwe language.

Graduates are prepared for careers in a variety of professional fields, including social services, for-profit and not-for-profit organizations, tribal, local, state or federal government, criminal and social justice fields, tribal economic development, as well as business and management. In addition, some graduates pursue advanced degrees in law, health, business, social work, education, museum studies, and fine arts.

Honors Requirements: Students must have a 3.75 GPA in the major.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

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7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
A second field of study (either a minor or another major) is required.

Core (12 cr)
- AMIN 1001 - Introduction to American Indian Studies [CDIVERSITY] (3.0 cr)
- AMIN 1010 - American Indian Experience to 1900 [LE CAT7, LECD CAT07, CDIVERSITY] (3.0 cr)
- AMIN 1020 - American Indian Experiences: 1900-present [LE CAT7, LECD CAT07, HUMANITIES, CDIVERSITY] (3.0 cr)

Take 3 or more credit(s) from the following:
- AMIN 3997 - Internship in American Indian Studies (4.0 - 8.0 cr)
- AMIN 4191 - Senior Study of Ojibwe Language (1.0 - 6.0 cr)
- AMIN 4990 - Directed Research (1.0 - 6.0 cr)

Subject Area Electives (24 cr)
One course from four of the five subject areas is required, a minimum of nine AMIN credits must be at the 3xxx-4xxx level and one course from the optional elective area may apply to the 24 credit total. AMIN 3997, 4191, and 4990 do not count toward this requirement.

Take 24 or more credit(s) from the following:

Language
- AMIN 11xx, 21xx, 31xx, 41xx courses apply here.

Take 0 or more course(s) from the following:
- AMIN 1103 - Beginning Ojibwe I [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
- AMIN 1104 - Beginning Ojibwe II [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
- AMIN 2103 - Intermediate Ojibwe I [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
- AMIN 2104 - Intermediate Ojibwe II [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)

Politics and Law
- AMIN 12xx, 22xx, 32xx, 42xx courses apply here.

Take 0 or more course(s) from the following:
- AMIN 2210 - American Indian Politics: Law, Sovereignty, and Treaty Rights [LE CAT8, SOC SCI, CDIVERSITY] (3.0 cr)
- AMIN 3230 - American Indian Tribal Government and Law [SOC SCI, CDIVERSITY] (3.0 cr)
- AMIN 4230 - Introduction to Federal Indian Law [SOC SCI, CDIVERSITY] (3.0 cr)
- AMIN 4240 - American Indian Education Policy Development in the 20th Century [CDIVERSITY] (3.0 cr)
- AMIN 4250 - American Indian Diplomacy: Treaties, Compacts, and Agreements [GLOBAL PER] (3.0 cr)

Art and Literature
- AMIN 16xx, 26xx, 36xx, 46xx courses apply here.

Take 0 or more course(s) from the following:
- AMIN 1606 - Introduction to American Indian Literature [LE CAT9, HUMANITIES, CDIVERSITY] (3.0 cr)
- AMIN 2605 - Survey of American Indian Arts [LE CAT9, FINE ARTS, CDIVERSITY] (3.0 cr)
- AMIN 3620 - Ojibwe Literatures: Sovereignty and Survivance [CDIVERSITY] (3.0 cr)
- AMIN 3660 - American Indian Novel [HUMANITIES, CDIVERSITY] (3.0 cr)
- AMIN 4630 - American Indians and the Media [HUMANITIES, CDIVERSITY] (3.0 cr)
- AMIN 4640 - American Indians in the Movies [HUMANITIES, CDIVERSITY] (3.0 cr)

Societies and Cultures
- AMIN 14xx, 24xx, 34xx, 44xx courses apply here.

Take 0 or more course(s) from the following:
- AMIN 2015 - Ojibwe History and Culture [SUSTAIN] (3.0 cr)
- AMIN 2405 - American Indian Families and Society [LE CAT8, SOC SCI, CDIVERSITY] (3.0 cr)
- AMIN 2407 - Boarding Schools and Beyond: A History of American Indian Education [LE CAT8, LECD CAT08, CDIVERSITY] (3.0 cr)
- AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
- AMIN 3420 - American Indians in Sports [LE CAT7, LECD CAT07, CDIVERSITY] (3.0 cr)
- AMIN 3430 - Global Indigenous Studies [GLOBAL PER] (3.0 cr)
- AMIN 3450 - American Indian Women [CDIVERSITY] (3.0 cr)

Tribal Administration
- AMIN 18xx, 28xx, 38xx, 48xx courses apply here.

Take 0 or more course(s) from the following:
- AMIN 2801 - Introduction to Tribal Administration and Governance (3.0 cr)
• AMIN 2820 - Foundations of Indigenous Leadership (3.0 cr)
• AMIN 3810 - Fundamentals of Tribal Strategic Management (3.0 cr)
• AMIN 3820 - Fundamentals of Tribal Project Management (3.0 cr)
• AMIN 4810 - Business Processes in Tribal Administration (3.0 cr)
• AMIN 4840 - Current Issues and Opportunities in Tribal Administration and Governance (3.0 cr)

Optional Elective
To reach the 24 credit minimum elective requirement students can apply one course from the following list.
Take no more than 1 course(s) from the following:
• ANTH 1604 - Cultural Anthropology [LE CAT6, LEIP CAT06, SOC SCI, GLOBAL PER] (4.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• ANTH 4621 - Myth and Sacred Symbols (3.0 cr)
• ANTH 4631 - Anthropology and Environment [SUSTAIN] (3.0 cr)
• ANTH 4633 - Ethnobotany [SUSTAIN] (4.0 cr)
• AST 1050 - Native Skywatchers: Indigenous Ethno- and ArchaeoAstronomy [CDIVERSITY] (3.0 cr)
• COMM 3535 - Intercultural Communication [LE CAT6, LEIP CAT06, CDIVERSITY] (4.0 cr)
• CRIM 3322 - Law and Society (3.0 cr)
• CRIM 3375 - Restorative Justice (3.0 cr)
• CRIM 4340 - Race, Crime and Justice (3.0 cr)
• ENGL 1582 - Introduction to World Literatures [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)
• GEOG 2305 - Geography of Cultural Diversity [CDIVERSITY] (3.0 cr)
• GEOG 4393 - Political Geography (3.0 cr)
• HIST 1304 - US History Part I: 1607-1877 [LE CAT7, HUMANITIES] (4.0 cr)
• HIST 1305 - US History Part II: 1865-Present [LE CAT7, HUMANITIES] (4.0 cr)
• HIST 2350 - Nutrition and American History [HUMANITIES, SUSTAIN] (4.0 cr)
• HIST 3939 - Europe in the Age of Renaissance and Reformation: 1348-1648 (4.0 cr)
• LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
• POL 1500 - Introduction to Comparative Politics [LE CAT6, LEIP CAT06, GLOBAL PER] (3.0 cr)
• POL 3515 - Theories of Comparative Politics (4.0 cr)
• POL 3600 - Political Concepts (4.0 cr)
• SOC 4949 - Race and Ethnic Relations (3.0 cr)
• SW 1619 - Race, Class, and Gender in the United States [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
• WS 2101 - Women, Race, and Class [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)

American Indian Studies Upper Division Electives (9 cr)
Between the subject area electives and this area, a minimum of nine AMIN credits must be at the 3xxx-4xxx level. AMIN 3393 & 3995 apply to this area. AMIN 3997, 4191, and 4990 do not count toward this requirement.

Advanced Writing Requirement (3 cr)
WRIT 31xx - Adv Writing (3 cr)
American Indian Studies Minor

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

Core Courses (6 cr)
Take 2 or more course(s) from the following:
• AMIN 1001 - Introduction to American Indian Studies [CDIVERSITY] (3.0 cr)
• AMIN 1010 - American Indian Experience to 1900 [LE CAT7, LECD CAT07, CDIVERSITY] (3.0 cr)
• AMIN 1020 - American Indian Experiences: 1900-present [LE CAT7, LECD CAT07, HUMANITIES, CDIVERSITY] (3.0 cr)
• AMIN 1103 - Beginning Ojibwe I [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)

Electives (12 cr)
Take at least 12 credits across the following two lists. If additional core courses are taken, they can be used toward this elective requirement total. Students may apply 3 courses at the AMIN 1xxx-2xxx level. One AMIN course with a minimum of 3 credits must be taken at the 3xxx level or higher. Students have the option to take all 12 credits from AMIN 3xxx level or higher. Most AMIN 1xxx-4xxx courses apply here. AMIN 3997, 4191, or 4990 do not count towards this requirement.

Take 0 - 3 course(s) from the following:
• AMIN 1104 - Beginning Ojibwe II [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• AMIN 1606 - Introduction to American Indian Literature [LE CAT9, HUMANITIES, CDIVERSITY] (3.0 cr)
• AMIN 2015 - Ojibwe History and Culture [SUSTAIN] (3.0 cr)
• AMIN 2103 - Intermediate Ojibwe I [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• AMIN 2104 - Intermediate Ojibwe II [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• AMIN 2210 - American Indian Politics: Law, Sovereignty, and Treaty Rights [LE CAT6, SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 2405 - American Indian Families and Society [LE CAT8, SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 2407 - Boarding Schools and Beyond: A History of American Indian Education [LE CAT8, LECD CAT08, CDIVERSITY] (3.0 cr)
• AMIN 2605 - Survey of American Indian Arts [LE CAT9, FINE ARTS, CDIVERSITY] (3.0 cr)
• AMIN 2801 - Introduction to Tribal Administration and Governance (3.0 cr)
• AMIN 2820 - Foundations of Indigenous Leadership (3.0 cr)

• Required Upper Division Elective
Take 3 or more credit(s) from the following:
• AMIN 3206 - Federal Indian Policy [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 3230 - American Indian Tribal Government and Law [SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 3393 - Projects in American Indian Studies (1.0 - 5.0 cr)
• AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
• AMIN 3420 - American Indians in Sports [LE CAT7, LECD CAT07, CDIVERSITY] (3.0 cr)
• AMIN 3430 - Global Indigenous Studies [GLOBAL PER] (3.0 cr)
• AMIN 3450 - American Indian Women [CDIVERSITY] (3.0 cr)
• AMIN 3620 - Ojibwe Literatures: Sovereignty and Survivance [CDIVERSITY] (3.0 cr)
• AMIN 3660 - American Indian Novel [HUMANITIES, CDIVERSITY] (3.0 cr)
• AMIN 3810 - Fundamentals of Tribal Strategic Management (3.0 cr)
• AMIN 3820 - Fundamentals of Tribal Project Management (3.0 cr)
• AMIN 3995 - Special Topics: (Various Title to be Assigned) (3.0 cr)
• AMIN 4230 - Introduction to Federal Indian Law [SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 4240 - American Indian Education Policy Development in the 20th Century [CDIVERSITY] (3.0 cr)
• AMIN 4250 - American Indian Diplomacy: Treaties, Compacts, and Agreements [GLOBAL PER] (3.0 cr)
• AMIN 4630 - American Indians and the Media [HUMANITIES, CDIVERSITY] (3.0 cr)
• AMIN 4640 - American Indians in the Movies [HUMANITIES, CDIVERSITY] (3.0 cr)
• AMIN 4810 - Business Processes in Tribal Administration (3.0 cr)
• AMIN 4840 - Current Issues and Opportunities in Tribal Administration and Governance (3.0 cr)
Duluth Campus

Anthropology B.A.
Anthropology, Sociology & Criminology
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 40
- Degree: Bachelor of Arts

Anthropology focuses on the holistic study of diverse peoples and cultures with a central focus on what it means to be human. We are committed to an integrative and comparative approach that draws on the rich tradition of the four-fields (cultural anthropology, archaeology, linguistics, biological anthropology) while also bringing the methods and insights of the discipline to issues of critical importance to today’s globalizing societies.

We emphasize qualitative methodology, including knowledge of the uses and limitations of standard methods, visual analysis and the production of visual representations of reality using tools such as photography and video, participatory research with communities, and public ethnography. We also emphasize a strong ethical component concerning the study of humans, and the relationship between theory and method in qualitative fieldwork.

Areas of knowledge and skills our program delivers:
- Specific ethnographic areas such as Middle, Central and South America, the Middle East, Europe, North America (including US culture), Africa.
- Political, social, and environmental issues within the context of international and intranational diversity, framed within the Department's overall unifying socially-relevant themes of inequality, identity, power, social change and development, and global multiculturalism.
- Community engagement and participatory culture.
- Major historical and contemporary theoretical perspectives.

A final project, ANTH 4653-Senior Seminar, provides anthropology majors a capstone experience to use their research skills in applied projects.

Honors requirements: Honors students participate in independent research, working closely with a faculty member. Qualifed majors apply to the honors program before the end of the second week of their senior year after they have completed or are enrolled in ANTH 4651-Development of Anthropological Theory or ANTH 4652-Cultural Theory for Wicked Problems.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A second field of study (either a minor or another major).

2) Study abroad is encouraged for all students and the department makes every effort to support such experiences.

Lower Division (8 cr)
Choose any two different ANTH 1xxx level courses, for a total of 8 credits. Most ANTH 1xxx courses apply here.

Take 2 or more courses from the following:
- ANTH 1080 - Understanding Global Cultures [LE CAT8, LEIP CAT08, SOC SCI, GLOBAL PER] (4.0 cr)
- ANTH 1602 - Biological Anthropology and Archaeology [LE CAT7, LEIP CAT07, SOC SCI] (4.0 cr)
- ANTH 1604 - Cultural Anthropology [LE CAT6, LEIP CAT06, SOC SCI, GLOBAL PER] (4.0 cr)
- ANTH 1620 - Introduction to Public Culture: Citizenship, Science, and Culture [GLOBAL PER] (4.0 cr)

Career Development (2 cr)
ANTH 2001 - Career Development in Anthropology (2.0 cr)

Upper Division Theory (4 cr)
ANTH 4651 - Development of Anthropological Theory (4.0 cr)
or ANTH 4652 - Cultural Theory for Wicked Problems (4.0 cr)

Upper Division Methods (4 cr)
ANTH 3156 - Digital and Participatory Research Methods (4.0 cr)
or ANTH 4620 - Archaeological Method and Theory (4.0 cr)
or SOC 3156 - Qualitative Research Methods and Analysis (4.0 cr)

Senior Capstone (3 cr)
ANTH 4653 - Senior Seminar (3.0 cr)

Electives (15 cr)
Students must take at least 2 different courses/6-8 credits in ANTH 3xxx and 2 different courses/6-8 credits in ANTH 4xxx. An additional course is required, which may be another ANTH course, or may be from a different area of study in the 'additional elective' area.

Note: ANTH 4696, 4697, 4699 & 4910 carry variable credit. Only three credits maximum in one course or combined from these three courses count toward the ANTH 4xxx requirement; additional credits will apply to the degree.

ANTH 3xxx
Most ANTH 3xxx courses apply here.
Take 2 or more courses from the following:
- ANTH 3080 - Cultural Constructions of the Body (4.0 cr)
- ANTH 3100 - Business Anthropology (4.0 cr)
- ANTH 3300 - Energy, Culture and Society [GLOBAL PER] (4.0 cr)
- ANTH 3618 - Ancient Middle America (3.0 cr)
- ANTH 3622 - Archaeology of the Old World (3.0 cr)
- ANTH 3624 - Archaeology of North America (3.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ANTH 3635 - Peoples and Cultures of Europe (3.0 cr)
- ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
- ANTH 3640 - What is a City?: Archaeological Perspectives on Urbanism [SUSTAIN] (3.0 cr)
- ANTH 3641 - The City in Film [FINE ARTS] (4.0 cr)
- ANTH 3691 - Independent Study in Anthropology (1.0 - 5.0 cr)
- ANTH 3888 - Anthropology of Food [SUSTAIN] (3.0 cr)
ANTH 4xxx
Most ANTH 4xxx courses apply here.
Take 2 or more course(s) from the following:
• ANTH 4100 - Visual Anthropology (4.0 cr)
• ANTH 4500 - The New Commons: Governing Shared Resources for Present and Future Generations [SUSTAIN] (4.0 cr)
• ANTH 4616 - Culture and Personality (3.0 cr)
• ANTH 4621 - Myth and Sacred Symbols (3.0 cr)
• ANTH 4623 - Anthropology and Contemporary Human Problems (3.0 cr)
• ANTH 4631 - Anthropology and Environment [SUSTAIN] (3.0 cr)
• ANTH 4633 - Ethnobotany [SUSTAIN] (4.0 cr)
• ANTH 4640 - Medical Anthropology (4.0 cr)
• ANTH 4644 - Anthropology of Law (4.0 cr)
• ANTH 4654 - Biological Anthropology (3.0 cr)
• ANTH 4655 - Forensic Anthropology (4.0 cr)
• ANTH 4691 - Independent Study in Anthropology (1.0 - 5.0 cr)
• ANTH 4695 - Special Topics: (Various Titles to be Assigned) (1.0 - 5.0 cr)
• Take at most 3 credit(s) from the following:
  • ANTH 4696 - Field Research in Archaeology (1.0 - 10.0 cr)
  • ANTH 4697 - Anthropology Internship (2.0 - 6.0 cr)
  • ANTH 4699 - Honors Project (2.0 - 4.0 cr)
  • ANTH 4910 - Teaching Assistantship in Anthropology (1.0 - 3.0 cr)

Additional Elective
Take 1 or more course(s) from the following:
• AAAS 3xxx-4xxx
• ANTH 1xxx-4xxx
• AMIN 3xxx-4xxx
• CRIM 3xxx-4xxx
• CUE 3xxx-4xxx
• GEOG 3xxx-4xxx
• LING 3xxx-4xxx
• SOC 3xxx-4xxx
• WS 3xxx-4xxx

Advanced Writing Requirement (3 cr)
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus
Anthropology Minor
Anthropology, Sociology & Criminology
College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 25

The anthropology minor examines the role of culture in human society, familiarizing students with the study of diverse peoples and cultures. Students are allowed flexibility in exploring substantive courses relevant to their interests.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Lower Division (8 cr)
Choose any two different ANTH 1xxx level courses, for a total of 8 credits. Most ANTH 1xxx courses will apply here.
Take 2 or more course(s) from the following:
- ANTH 1080 - Understanding Global Cultures [LE CAT8, LEIP CAT08, SOC SCI, GLOBAL PER] (4.0 cr)
- ANTH 1602 - Biological Anthropology and Archaeology [LE CAT7, LEIP CAT07, SOC SCI] (4.0 cr)
- ANTH 1604 - Cultural Anthropology [LE CAT6, LEIP CAT06, SOC SCI, GLOBAL PER] (4.0 cr)
- ANTH 1620 - Introduction to Public Culture: Citizenship, Science, and Culture [GLOBAL PER] (4.0 cr)

Career Development (2 cr)
- ANTH 2001 - Career Development in Anthropology (2.0 cr)

Electives (15 cr)
Students must take at least 2 courses/6-8 credits in ANTH 3xxx and 2 courses/6-8 credits in ANTH 4xxx. An additional course is required, which may be another ANTH course, or may be from a different area of study in the 'additional elective' area.

Note: ANTH 4696, 4697, 4699, & 4910 carry variable credit. Only three credits maximum in one course or combined from these three courses counts towards the ANTH 4xxx requirement; additional credits will apply to the degree.

ANTH 3xxx
Most ANTH 3xxx courses will apply here.
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
- ANTH 3080 - Cultural Constructions of the Body (4.0 cr)
- ANTH 3100 - Business Anthropology (4.0 cr)
- ANTH 3156 - Digital and Participatory Research Methods (4.0 cr)
- ANTH 3300 - Energy, Culture and Society [GLOBAL PER] (4.0 cr)
- ANTH 3618 - Ancient Middle America (3.0 cr)
- ANTH 3622 - Archaeology of the Old World (3.0 cr)
- ANTH 3624 - Archaeology of North America (3.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ANTH 3635 - Peoples and Cultures of Europe (3.0 cr)
- ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
- ANTH 3640 - What is a City?: Archaeological Perspectives on Urbanism [SUSTAIN] (3.0 cr)
- ANTH 3641 - The City in Film [FINE ARTS] (4.0 cr)
- ANTH 3688 - Anthropology of Food [SUSTAIN] (3.0 cr)

ANTH 4xxx
Most ANTH 4xxx courses will apply here.
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
- ANTH 4100 - Visual Anthropology (4.0 cr)
- ANTH 4500 - The New Commons: Governing Shared Resources for Present and Future Generations [SUSTAIN] (4.0 cr)
- ANTH 4616 - Culture and Personality (3.0 cr)
• ANTH 4620 - Archaeological Method and Theory (4.0 cr)
• ANTH 4621 - Myth and Sacred Symbols (3.0 cr)
• ANTH 4623 - Anthropology and Contemporary Human Problems (3.0 cr)
• ANTH 4631 - Anthropology and Environment [SUSTAIN] (3.0 cr)
• ANTH 4633 - Ethnobotany [SUSTAIN] (4.0 cr)
• ANTH 4640 - Medical Anthropology (4.0 cr)
• ANTH 4644 - Anthropology of Law (4.0 cr)
• ANTH 4651 - Development of Anthropological Theory (4.0 cr)
• ANTH 4652 - Cultural Theory for Wicked Problems (4.0 cr)
• ANTH 4653 - Senior Seminar (3.0 cr)
• ANTH 4654 - Biological Anthropology (3.0 cr)
• ANTH 4655 - Forensic Anthropology (4.0 cr)
• ANTH 4691 - Independent Study in Anthropology (1.0 - 5.0 cr)
• ANTH 4985 - Critical Animal Studies (4.0 cr)
• Optional Elective (3 cr)
  Take at most 3 credit(s) from the following:
  • ANTH 4696 - Field Research in Archaeology (1.0 - 10.0 cr)
  • ANTH 4697 - Anthropology Internship (2.0 - 6.0 cr)
  • ANTH 4699 - Honors Project (2.0 - 4.0 cr)
  • ANTH 4910 - Teaching Assistantship in Anthropology (1.0 - 3.0 cr)

Additional Elective
Take 1 or more course(s) from the following:
• AAAS 3xxx-4xxx
• AMIN 3xxx-4xxx
• ANTH 1xxx-4xxx
• CRIM 3xxx-4xxx
• CUE 3xxx-4xxx
• GEOG 3xxx-4xxx
• LING 3xxx-4xxx
• SOC 3xxx-4xxx
• WS 3xxx-4xxx
Duluth Campus

Chinese Area Studies B.A.
World Languages & Cultures
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 27 to 43
- This program requires summer terms.
- Study abroad or internship is required.
- Degree: Bachelor of Arts

This program prepares students to thrive as globally aware and cross-culturally competent citizens through a critical understanding of Chinese cultures. Students develop functional Mandarin language communication skills. Topics studied pertain to Chinese literature, history, politics, and art. This major addresses the role of China within larger global contexts. A major in Chinese Area Studies prepares graduates to apply their language skills, cultural knowledge, and global awareness to a wide variety of career choices (government, international relations, foreign service, immigration services, tourism, and entrepreneurship).

Study abroad or internship (CHIN 3097) is required for this major.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the xxx level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A second field of study (either a minor or another major).
2) Study abroad or an internship (CHIN 3097) is required for this major.

Required Language Core (0-16 cr)
Students with previous language study may be exempt from some core requirements and should consult the department about placement. Students who fulfill the study abroad requirement with CHIN 1399 will be exempt from CHIN 1202 by request.

- CHIN 1101 - Beginning Chinese I: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
- CHIN 1102 - Beginning Chinese II: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
- CHIN 1201 - Intermediate Chinese I: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
- CHIN 1202 - Intermediate Chinese II: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Required Culture Core (4 cr)
- CHIN 3042 - Aspects of Chinese Cultures: Interface between Traditions and Contemporary Values [HUMANITIES, GLOBAL PER] (4.0 cr)

Required Study Abroad or Internship (3 cr)
CHIN 1399 is strongly recommended and is only offered periodically in the summer. Students participate in Mandarin courses from beginning level to advanced level depending on student proficiency; consists of 90 in-class hours. Students learn Chinese culture in formal academic settings as well as in on-site authentic historical and contemporary environments. Students may participate in other programs, as long as approved by a department advisor.

Take 1 or more course(s) from the following:
- CHIN 1399 - Chinese Language in China - Study Abroad [LEIP CAT03, GLOBAL PER] (6.0 cr)
- CHIN 3097 - Internship (1.0 - 6.0 cr)
- INTB 4201 - Chinese Business and Economy [GLOBAL PER] (3.0 cr)

Required Electives (16 cr)
Most CHIN 3xxx-4xxx courses apply here.

Take 16 or more credit(s) from the following:
- ANTH 3888 - Anthropology of Food [SUSTAIN] (3.0 cr)
- ANTH 4616 - Culture and Personality (3.0 cr)
- ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)
- CHIN 3097 - Internship (1.0 - 6.0 cr)
- CHIN 4591 - Independent Study (1.0 - 4.0 cr)
- COMM 3535 - Intercultural Communication [LE CAT6, LEIP CAT06, CDIVERSITY] (4.0 cr)
- COMM 4210 - Theories of Intercultural Communication (3.0 cr)
- CUE 3001 - Foundations of Cultural Entrepreneurship I (3.0 cr)
- CUE 3002 - Foundations of Cultural Entrepreneurship II (3.0 cr)
- CUE 4002 - Managing Cultural Organizations (3.0 cr)
- ENGL 1582 - Introduction to World Literatures [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)
- HIST 2405 - History of Chinese Culture (4.0 cr)
- HIST 2410 - Modern China, Japan, Korea, and East Asia (4.0 cr)
- HIST 3463 - History of Modern China (4.0 cr)
- HIST 3465 - Twentieth Century China Politics (4.0 cr)
- LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
- LING 2101 - Phonetics and Phonology [NAT SCI] (3.0 cr)
- PHIL 1001 - Introduction to Philosophy [LE CAT7, HUMANITIES] (3.0 cr)
- PHIL 1007 - Philosophy and World Religions [LE CAT7, LEIP CAT07, HUMANITIES, GLOBAL PER] (3.0 cr)
- PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
- PHIL 3421 - Eastern Philosophy (4.0 cr)
- POL 5051 - Transitional Politics of Asia (3.0 cr)

Advanced Writing Requirement (3 cr)
Recommended: WRIT 3100 - Advanced Writing: Language and Literature
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus

Chinese Area Studies Minor
World Languages & Cultures

College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12 to 28

This program prepares students to thrive as globally aware and cross-culturally competent citizens through a critical understanding of Chinese cultures. Students develop functional Mandarin language communication skills. Topics studied pertain to Chinese literature, history, politics, and art. This program addresses the role of China within larger global contexts. Chinese Area Studies prepares graduates to apply their language skills, cultural knowledge, and global awareness to a wide variety of career choices (government, international relations, foreign service, immigration services, tourism, and entrepreneurship).

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Core Language Requirement (0-16 cr)
Students with previous language study may be exempt from some core requirements and should consult the department about placement. Students who participate in CHIN 1399 (study abroad, 6 cr) will be exempt from CHIN 1202 by request.

CHIN 1101 - Beginning Chinese I: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
CHIN 1102 - Beginning Chinese II: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
CHIN 1201 - Intermediate Chinese I: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
CHIN 1202 - Intermediate Chinese II: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Core Requirement (4 cr)
CHIN 3042 - Aspects of Chinese Cultures: Interface between Traditions and Contemporary Values [HUMANITIES, GLOBAL PER] (4.0 cr)

Electives (8 cr)
Most CHIN 3xxx-4xxx courses apply here.

Take 8 or more credit(s) from the following:
- ANTH 3888 - Anthropology of Food [SUSTAIN] (3.0 cr)
- ANTH 4616 - Culture and Personality (3.0 cr)
- ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)
- CHIN 1399 - Chinese Language in China - Study Abroad [LEIP CAT03, GLOBAL PER] (6.0 cr)
- CHIN 3097 - Internship (1.0 - 6.0 cr)
- CHIN 3591 - Independent Study (1.0 - 4.0 cr)
- CHIN 4591 - Independent Study (1.0 - 4.0 cr)
- COMM 3535 - Intercultural Communication [LE CAT6, LEIP CAT06, CDIVERSITY] (4.0 cr)
- COMM 4210 - Theories of Intercultural Communication (3.0 cr)
- CUE 3001 - Foundations of Cultural Entrepreneurship I (3.0 cr)
- CUE 3002 - Foundations of Cultural Entrepreneurship II (3.0 cr)
- CUE 4002 - Managing Cultural Organizations (3.0 cr)
- ENGL 1582 - Introduction to World Literatures [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)
- HIST 2405 - History of Chinese Culture (4.0 cr)
- HIST 2410 - Modern China, Japan, Koreas, Vietnam and East Asia (4.0 cr)
- HIST 3463 - History of Modern China (4.0 cr)
- HIST 3465 - Twentieth Century China Politics (4.0 cr)
- INTB 4201 - Chinese Business and Economy [GLOBAL PER] (3.0 cr)
- LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
- LING 2101 - Phonetics and Phonology [NAT SCI] (3.0 cr)
- PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
- PHIL 3291 - Current Social Political Philosophy (4.0 cr)
• **PHIL 3421** - Eastern Philosophy (4.0 cr)
• **POL 3518** - Transitional Politics of Asia (3.0 cr)
Duluth Campus
Cognitive Science Minor
Philosophy
College of Liberal Arts

• Program Type: Undergraduate free-standing minor
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 18

Cognitive science is the interdisciplinary attempt to understand the mind, especially the human mind (with the prospect of creating artificial minds coming in a close second).

Understanding the mind and intelligence has long been a goal that seemed out of reach. The mind, consciousness, intelligence, and the related phenomena have been addressed by researchers in many areas including philosophy, psychology, linguistics, medicine, neuroscience, and artificial intelligence. These disciplines have very different histories and at universities are often separated by distance and academic culture. However, in the past 30 years, there has been a convergence of these disciplines on a few research paradigms: computational models of perception and reasoning, connectionism, and embodied cognition. It is now possible to form a more complete understanding of minds by drawing on contributions from all these disciplines, and a great deal of progress has been made. This has led to the rise at many universities of interdisciplinary programs in cognitive science. The programs exploit the insights that come from a variety of disciplinary approaches to understanding a single phenomenon: cognition.

More specifically, cognitive science aims to understand the nature and development of such intelligent capacities as consciousness, perception, information processing, language acquisition and processing, planning, reasoning, learning, representation and use of knowledge, and problem-solving, whether these capacities are realized in biological or artificial systems. The cognitive science minor looks to the theoretical foundations, the substantive empirical results, and the methodological tools of the contributing disciplines of linguistics, computer science, philosophy, and psychology. The hope of cognitive science is that by combining the methods and results of all these branches, we will be able to provide a global understanding of the mind, how it works, and why it works that way.

Graduates of the minor program will be prepared for study in one of the many recently developed graduate cognitive science programs (including the PhD offered at the Center for Cognitive Science at the University of Minnesota, Twin Cities) as well as graduate study in related programs such as cognition, brain, and behavior, cognitive neuroscience, artificial intelligence, and human-computer interaction. Those who choose to study the law, a path frequently chosen by philosophy majors, will be well suited for legal practice concerned with the variety of legal complexities associated with the development of these new technologies.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
• 3.00 already admitted to the degree-granting college
• 3.00 transferring from another University of Minnesota college

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
Core Requirement (3 cr)
PHIL 1025 - Introduction to Cognitive Science [NAT SCI] (3.0 cr)

Required Electives (15 cr)
Five courses across the listed subject areas, with the following stipulations:
Two courses maximum may come from any one listed subject area.
For the purposes of the minor: Computer Science (CS), Electrical Engineering (EE), Industrial Engineering (IE) and Mechanical Engineering (ME) will be considered as a single subject.
Students are advised to review course prerequisites for upper-division electives.

Computer Science
Take no more than 2 course(s) from the following:
• CS 5541 - Artificial Intelligence (4.0 cr)
• CS 5751 - Introduction to Machine Learning and Data Mining (4.0 cr)
• CS 5761 - Introduction to Natural Language Processing (4.0 cr)

Linguistics
Take no more than 2 course(s) from the following:
• LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
• LING 3102 - Syntax (3.0 cr)
• LING 3103 - Semantics and Pragmatics (3.0 cr)
• LING 4103 - Morphology: Word Structures and Rules (3.0 cr)

Philosophy
Take no more than 2 course(s) from the following:
• PHIL 1018 - Logic [LE CAT2, LOGIC & QR] (4.0 cr)
• PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
• PHIL 3570 - Philosophy of Psychology (4.0 cr)

Psychology
Take no more than 2 course(s) from the following:
• PSY 3061 - Physiological Psychology (4.0 cr)
• PSY 3520 - Introduction to Industrial/Organizational Psychology (4.0 cr)
• PSY 3611 - Learning and Behavior (4.0 cr)
• PSY 3613 - Applied Behavior Analysis and Behavior Change (4.0 cr)
• PSY 3621 - Cognition (4.0 cr)
• PSY 3661 - Psychology of Language (3.0 cr)
• PSY 3697 - Sensation and Perception (4.0 cr)
• PSY 5130 - Evolutionary Psychology (3.0 cr)
Duluth Campus
Communication B.A.
Communication
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 43
- Degree: Bachelor of Arts

At the core of the communication discipline is a concern for the relationship between symbolic action (speaking, writing, etc.) and social change. The BA in communication emphasizes the breadth and diversity of the communication field, with an integrated focus that spans social scientific and cultural/historical methodologies. Students develop conceptual and research competence in the areas of interpersonal communication, mass media, and rhetorical theory and practice.

Honors Requirements: Candidates must be communication majors with a 3.30 GPA in all communication courses and 3.30 U of MN GPA overall. Students write an honors-quality paper sponsored by a communication faculty member and approved by two additional communication faculty. Candidates apply before the end of the first four weeks of their senior year. Contact the department head or academic adviser for more information.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The cumulative minimum UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A second field of study (either a minor or another major).
2) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

Core Courses (12 cr)
Students must complete the core with a C or better to be admitted to COMM 5000.

- COMM 1000 - Human Communication Theory [LE CAT3, SOC SCI] (3.0 cr)
- COMM 2025 - Communication Inquiry: Rhetorical and Historical Methods (3.0 cr)
- COMM 2030 - Communication Inquiry: Social Scientific Methods (3.0 cr)
- COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
  or COMM 1511 - Honors: Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)

Electives
Eight elective courses totaling at least 24 credits are required. One course is required from each distributed electives area. An additional 15 credits must be completed. Within these 15 credits, 9 credits must be COMM 3xxx level or above. A maximum of 3 credits from any combination of the following courses may apply to the major: COMM 3310, 4394, 4397, 4399, and 5391. COMM 3300-TA does not apply to the major but does apply to the overall degree.

Distributed Electives (9 cr)
Take at least one course from each area. Additional courses may be applied to the electives area below.

Interpersonal Communication
Take 1 or more course(s) from the following:
- COMM 3200 - Interpersonal Communication Theory (3.0 cr)
- COMM 3205 - Relationship Communication (3.0 cr)
- COMM 3210 - Group Communication (3.0 cr)
- COMM 3225 - Listening Across Difference (3.0 cr)
- COMM 3230 - Mindful Communication (3.0 cr)
- COMM 3295 - Special Topics: Interpersonal Communication (Various titles to be assigned) (3.0 cr)
- COMM 3400 - Health Communication (3.0 cr)
- COMM 3535 - Intercultural Communication [LE CAT6, LEIP CAT06, CDIVERSITY] (4.0 cr)
- COMM 3700 - Interpersonal Influence (3.0 cr)
- COMM 4210 - Theories of Intercultural Communication (3.0 cr)
- COMM 4220 - Interpersonal Communication & Health Outcomes (3.0 cr)

Media Studies
Take 1 or more course(s) from the following:
- COMM 2101 - Foundations of Mass Communication [LE CAT8, SOC SCI] (3.0 cr)
- COMM 3211 - Communication and Technology in the Information Age (3.0 cr)
- COMM 3406 - Health Campaigns (3.0 cr)
- COMM 3505 - Media Communications (3.0 cr)
- COMM 3515 - Communication and Popular Culture (3.0 cr)
- COMM 3520 - Media Effects [SOC SCI] (3.0 cr)
- COMM 3530 - Dark Side of Media and Communication (3.0 cr)
- COMM 3550 - Children and Media (3.0 cr)
- COMM 3560 - Video Game Entertainment (3.0 cr)
- COMM 3595 - Special Topics: Media Communication (3.0 cr)
- COMM 4505 - Media Theory and Research (3.0 cr)

Rhetoric
Take 1 or more course(s) from the following:
- COMM 3115 - Persuasion and Argumentation in Public Speaking (3.0 cr)
- COMM 3510 - Ethics in Human Communication (3.0 cr)
- COMM 3610 - Philosophy and Rhetoric [HUMANITIES] (3.0 cr)
- COMM 3612 - Rhetorical Criticism (3.0 cr)
- COMM 3615 - Analysis of Public Discourse (3.0 cr)
- COMM 3620 - Controversy in the Boundary Waters [SUSTAIN] (3.0 cr)
- COMM 3625 - Rhetoric of Globalization [GLOBAL PER] (3.0 cr)
- COMM 3695 - Special Topics in Rhetoric Communication (3.0 cr)
- COMM 4500 - History of Rhetoric (3.0 cr)

Electives (15 cr)
To satisfy this requirement, students may take two courses at the COMM 1xxx-2xxx level. Students must take a minimum of 9 credits from COMM 3xxx level or above courses. Students have the option to take all 15 credits from COMM 3xxx level or above courses to satisfy this requirement.
Take 15 or more credit(s) from the following:

COMM 1xxx (2 courses may apply)
Take no more than 2 course(s) from the following:
- COMM 1010 - Persuasion [LE CAT6, SOC SCI] (3.0 cr)
• COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• COMM 1500 - Media and Society [LE CAT8, HUMANITIES] (3.0 cr)
• COMM 1600 - Argumentation and Debate: A Practical Approach [LOGIC & QR] (3.0 cr)

**COMM 3xxx or above (9 cr required)**

Additional courses taken within the distributed electives areas may apply to this area.

Take 9 or more credit(s) from the following:

- COMM 3116 - Professional Communication (3.0 cr)
- COMM 3215 - Conflict Management (3.0 cr)
- COMM 3223 - Communication and Creativity (3.0 cr)
- COMM 3395 - Special Topics: (Various Titles to be Assigned) (3.0 cr)
- COMM 3525 - Deciding What's News (3.0 cr)
- COMM 3555 - Mass Media Addiction (3.0 cr)
- COMM 3570 - Telling Stories about the Holocaust using Memoir and Testimony (3.0 cr)
- COMM 3800 - Community Empowerment in South India - Study Abroad [GLOBAL PER] (4.0 cr)
- COMM 4100 - Ecological Communication (3.0 cr)

**Optional Experiences (3 cr)**

A maximum of 3 credits from any combination of the following courses may apply to the major.

Take at most 3 credit(s) from the following:

- COMM 3310 - Research Assistant in Communication (1.0 - 6.0 cr)
- COMM 4394 - Directed Research in Communication (1.0 - 6.0 cr)
- COMM 4397 - Internship in Communication (1.0 - 8.0 cr)
- COMM 4399 - Directed Projects in Communication (1.0 - 6.0 cr)
- COMM 5391 - Independent Study in Communication (1.0 - 6.0 cr)

**Senior Seminar (3 cr)**

Students must complete the required core (COMM 1000, 1112 or 1511, 2025, 2030) with a C or better to be admitted to any COMM 5000. This prerequisite is verified by the department prior to the start of every term. Students not satisfying the prerequisite are notified by email. COMM 5000 is not included within the electives area.

COMM 5000 - Senior Seminar (3.0 cr)

**Advanced Writing Requirement (3 cr)**

WRIT 31xx - Adv Writing (3 cr)
The communication minor emphasizes the breadth and diversity of the communication field (interpersonal communication, mass media and rhetorical theory and practice).

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Core Courses (6 cr)
Students must complete the following courses with a C or better.
COMM 1000 - Human Communication Theory [LE CAT3, SOC SCI] (3.0 cr)
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1511 - Honors: Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)

Electives
Five elective courses totaling 15 credits are required. Two of these courses must be from at least two of the Distributed Electives areas. An additional nine credits must be completed. Within these nine credits, six credits must be COMM 3xxx level or above with the following restrictions: COMM 3300, 3310, 4394, 4397, 4399 & 5391 do not apply to the minor, but do apply as elective credit(s) toward the degree.

Distributed Electives (6 cr)
Take at least one course from two of the following areas. Additional courses may be applied to the Other Electives area.

Interpersonal Communication
Take 0 - 1 course(s) from the following:
• COMM 3200 - Interpersonal Communication Theory (3.0 cr)
• COMM 3205 - Relationship Communication (3.0 cr)
• COMM 3210 - Group Communication (3.0 cr)
• COMM 3225 - Listening Across Difference (3.0 cr)
• COMM 3230 - Mindful Communication (3.0 cr)
• COMM 3295 - Special Topics: Interpersonal Communication (Various titles to be assigned) (3.0 cr)
• COMM 3400 - Health Communication (3.0 cr)
• COMM 3535 - Intercultural Communication [LE CAT6, LEIP CAT06, CDIVERSITY] (4.0 cr)
• COMM 3700 - Interpersonal Influence (3.0 cr)
• COMM 4210 - Theories of Intercultural Communication (3.0 cr)
• COMM 4220 - Interpersonal Communication & Health Outcomes (3.0 cr)
or Media Studies
Take 0 - 1 course(s) from the following:
• COMM 2101 - Foundations of Mass Communication [LE CAT8, SOC SCI] (3.0 cr)
• COMM 3211 - Communication and Technology in the Information Age (3.0 cr)
• COMM 3405 - Health Campaigns (3.0 cr)
• COMM 3505 - Media Communications (3.0 cr)
• COMM 3515 - Communication and Popular Culture (3.0 cr)
• COMM 3520 - Media Effects [SOC SCI] (3.0 cr)
• COMM 3530 - Dark Side of Media and Communication (3.0 cr)
• COMM 3550 - Children and Media (3.0 cr)
• COMM 3560 - Video Game Entertainment (3.0 cr)
• COMM 3595 - Special Topics: Media Communication (3.0 cr)
• COMM 4505 - Media Theory and Research (3.0 cr)
or Rhetoric
Take 0 - 1 course(s) from the following:
• COMM 3115 - Persuasion and Argumentation in Public Speaking (3.0 cr)
• COMM 3510 - Ethics in Human Communication (3.0 cr)
• COMM 3610 - Philosophy and Rhetoric [HUMANITIES] (3.0 cr)
• COMM 3612 - Rhetorical Criticism (3.0 cr)
• COMM 3615 - Analysis of Public Discourse (3.0 cr)
• COMM 3620 - Controversy in the Boundary Waters [SUSTAIN] (3.0 cr)
• COMM 3625 - Rhetoric of Globalization [GLOBAL PER] (3.0 cr)
• COMM 3695 - Special Topics in Rhetoric Communication (3.0 cr)
• COMM 4500 - History of Rhetoric Communication (3.0 cr)

Other Electives (9 cr)
To satisfy this requirement, students may take one course at the COMM 1xxx-2xxx level. Students must take a minimum of six credits from COMM 3xxx level or above courses. Students have the option to take all nine credits from COMM 3xxx level or above to satisfy this requirement. Courses satisfying another requirement area in the minor cannot apply to this area.
Take no more than 1 course(s) from the following:
• COMM 1010 - Persuasion [LE CAT6, SOC SCI] (3.0 cr)
• COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• COMM 1500 - Media and Society [LE CAT8, HUMANITIES] (3.0 cr)
• COMM 1600 - Argumentation and Debate: A Practical Approach [LOGIC & QR] (3.0 cr)
• COMM 2025 - Communication Inquiry: Rhetorical and Historical Methods (3.0 cr)
• COMM 2030 - Communication Inquiry: Social Scientific Methods (3.0 cr)
• COMM 3xxx-4xxx (6 cr required)
Additional courses taken within the Distributed Electives areas may apply to this area. NOTE: COMM 3300, 3310, 4394, 4397, 4399 & 5391 do not apply to the minor, but do apply as elective credit(s) toward the degree.
Take 6 or more credit(s) from the following:
• COMM 3116 - Professional Communication (3.0 cr)
• COMM 3215 - Conflict Management (3.0 cr)
• COMM 3223 - Communication and Creativity (3.0 cr)
• COMM 3395 - Special Topics: (Various Titles to be Assigned) (3.0 cr)
• COMM 3525 - Deciding What's News (3.0 cr)
• COMM 3555 - Mass Media Addiction (3.0 cr)
• COMM 3570 - Telling Stories about the Holocaust using Memoir and Testimony (3.0 cr)
• COMM 3800 - Community Empowerment in South India - Study Abroad [GLOBAL PER] (4.0 cr)
• COMM 4100 - Ecological Communication (3.0 cr)
Duluth Campus
Criminology B.A.
Anthropology, Sociology & Criminology
College of Liberal Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 42
• Degree: Bachelor of Arts

Criminology is the study of crime and criminal behavior. The criminology program focuses on crime as a social phenomenon and the causes of criminal behavior. The major provides an overview of institutions, issues and causes of crime, and social control; it also offers a strong foundation in liberal arts, a basic knowledge of behavioral sciences, and a strong professional growth potential for those pursuing a career in criminology or the criminal justice system. Many criminology majors enter law, law enforcement, corrections, and other social service careers or graduate school.

Honors requirements: The department honors program recognizes majors who demonstrate outstanding academic performance, provides special educational opportunities for such students, and encourages the development of specialty areas within the major. Honors students participate in independent research, working closely with a faculty member. Qualified majors apply to the honors program before the end of the second week of the first semester of their senior year.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current University of Minnesota Duluth students who change colleges to College of Liberal Arts are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
1. A second field of study (either a minor or another major).

2. Completion of the lower division core requirements before beginning the upper division core.

3. Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

4. Students electing to major in criminology and sociology must follow the fall 2014 requirements or later for both programs.

Lower Division Core (12 cr)
A grade of C or better is required in each course.
CRIM 1301 - Introduction to Criminology [LE CAT8, SOC SCI] (4.0 cr)
CRIM 2311 - Criminological Theory (4.0 cr)
SOC 2155 - Introduction to Research Methods and Analysis (4.0 cr)

Upper Division Core (11 cr)
After successfully completing SOC 4587, a student must wait at least one semester before registering for SOC 4597. Students intern in a setting related to their career interests. (Students also majoring in psychology may request to substitute PSY 3020 for SOC 3155. See the department head for approval.)
SOC 3155 - Quantitative Research Methods and Analysis (4.0 cr)
SOC 4587 - Internship Preparation (1.0 cr)
SOC 4597 - Internship (6.0 - 8.0 cr)

Inequality Course (3 cr)
Students take at least one course listed below to fulfill this requirement. If both CRIM inequality courses are taken, one course will apply as elective credit toward the major.
Take 1 or more course(s) from the following:
• CRIM 4323 - Women and Justice (3.0 cr)
• CRIM 4340 - Race, Crime and Justice (3.0 cr)
• SOC 3330 - The American Civil Rights Movement [SOC SCI, C DIVERSITY] (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SOC 4947 - Sociology of Gender Identities and Systems (3.0 cr)
• SOC 4949 - Race and Ethnic Relations (3.0 cr)

Criminology Electives (9 cr)
Most CRIM 3xxx-4xxx courses will apply here.
Take 9 or more credit(s) from the following:
• CRIM 3322 - Law and Society (3.0 cr)
• CRIM 3324 - Sociology of Criminal Law (3.0 cr)
• CRIM 3328 - Delinquency and Juvenile Justice (3.0 cr)
• CRIM 3336 - Crime and the Media (3.0 cr)
• CRIM 3338 - Sociology of Gangs (3.0 cr)
• CRIM 3344 - Law Enforcement and Society (3.0 cr)
• CRIM 3350 - Psychopathology and Crime (3.0 cr)
• CRIM 3361 - Correctional Continuum (3.0 cr)
• CRIM 3369 - Correctional Assessment and Intervention (3.0 cr)
• CRIM 3375 - Restorative Justice (3.0 cr)
• CRIM 3380 - Death Penalty (3.0 cr)
• CRIM 3395 - Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• CRIM 4305 - Mentally Ill Offenders in the Criminal Justice System (3.0 cr)
• CRIM 4350 - Corporate and Government Crime (3.0 cr)
• CRIM 4382 - Victimology (3.0 cr)
• CRIM 4384 - Child Abuse and Child Protection in Minnesota (3.0 cr)
• CRIM 4391 - Independent Study in Criminology (1.0 - 6.0 cr)
• CRIM 4399 - Honors Project Criminology (1.0 - 8.0 cr)
• CRIM 4910 - Teaching Assistantship in Criminology (1.0 - 3.0 cr)
• CRIM 4930 - Understanding Violence (3.0 cr)
• CRIM 3355 - Criminal Forensic Psychology (3.0 cr)
or PSY 5155 - Forensic Psychology (3.0 cr)

Additional Required Elective (3 cr)
Students may apply an additional CRIM 3xxx-4xxx course to this area.
Take 3 or more credit(s) from the following:
• AAAS 3xxx-4xxx
or ANTH 3xxx-4xxx
or CRIM 3xxx-4xxx

Advanced Writing Requirement (3 cr)
WRIT 3140 or 3160 are recommended.
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus
Cultural Entrepreneurship B.A.
World Languages & Cultures
College of Liberal Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 43 to 65
• This program requires summer terms.
• Degree: Bachelor of Arts

Cultural entrepreneurship is an emerging academic discipline that examines how cultural products traditionally associated with the fine and liberal arts, such as art, theater, poetry, and literature, but also cultural activities such as sports, music, food, and film events, are having an increasingly important impact on the growth of local, national, and global economies. Cultural entrepreneurship scholars thus study the impact of culture on economies, and develop new strategies for enhancing local livelihoods by creative, new, sustainable, socially responsible ways of producing income through cultural activity.

The program stresses the centrality of culture in the success of entrepreneurial endeavors. Building on the concept of cognitive ambidexterity, it combines training in quantitative skills and predictive logic that is common in business schools with extensive work in creative logic and thinking, as it is most often cultivated in the liberal arts. Predictive logic refers to the ability to generate models, forecasts, and estimates, while creative logic addresses the ability to self-examine, understand social contexts, and to shape the future by identifying courses of action and negotiating complexities of human decision-making.

Students in this program will complete an extensive core of entrepreneurship, management and conceptual competency in the culture and creative economy. Students develop cultural literacy through the study of at least one Foreign or Indigenous language. Students can choose one of the two sub-plans: certificate of business administration or leadership development. To contextualize cultural entrepreneurship students are required to take a minor or major in another pre-approved field of study. Majors are encouraged to incorporate a study abroad experience into their programs.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework.

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Information current as of October 02, 2018
minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1) A second field of study, either a minor or another major in one of the following: Anthropology, American Indian Studies, Chinese Area Studies, Communication, French Studies, German Studies, Hispanic Studies, Digital Writing, Literature & Design minor, Journalism, Latin American Studies, Women, Gender and Sexuality Studies. Cultural Entrepreneurship (CUE) program director approval is required if students wish to minor or major in a field not listed above.

2) Written application to the CUE program director, explaining why the student wants to be admitted to the program and their career goals.

3) Study abroad is encouraged for all students and the department makes every effort to support such experiences. Students are advised to visit with the CUE program director about how courses abroad may be incorporated into this program.

4) The program encourages students to take internship and field study courses during their junior or senior years. Students are advised to visit with the program director to discuss internship opportunities.

Entrepreneurship Core (12 cr)

- CUE 1001 - Culture Industry and Creative Economy [GLOBAL PER] (3.0 cr)
- CUE 3001 - Foundations of Cultural Entrepreneurship I (3.0 cr)
- CUE 3002 - Foundations of Cultural Entrepreneurship II (3.0 cr)
- CUE 4002 - Managing Cultural Organizations (3.0 cr)

Conceptual Competency Core (10-13 cr)

- CUE 1111 - Creative Problem Solving (3.0 cr)
- CUE 3101 - Introduction to Design Thinking and Conceptual Competencies (3.0 cr)

Take no more than 1 course(s) from the following:

- CUE 4001 - Entrepreneurial Finance for Creative Industries (3.0 cr)
- CUE 4003 - Entrepreneurial Ethics and Values (3.0 cr)
- ES 3200 - Environmental and Ecological Justice (3.0 cr)
- ES 3500 - Ecological Economics (3.0 cr)
- GEOG 2313 - Economic Geography [LE CAT6, SOC SCI] (3.0 cr)
- GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
- GIS 2552 - Mapping Our World [LOGIC & QR] (3.0 cr)

Take no more than 1 course(s) from the following:

- CUE 4091 - Independent Study (1.0 - 4.0 cr)
- CUE 4096 - Field Study (2.0 cr)
- CUE 4097 - Internship (2.0 cr)

Foreign Languages and Cultural Literacy Core (3-24 cr)

Through advisement and approval by the director students select one of the following options:

A) Complete the advanced level course & a 3xxx level course of a Foreign Language taught in the language from: AMIN, CHIN, FR, GER, RUSS, SPAN.

B) Complete the intermediate level sequence in ONE Foreign Language & take TWO Foreign Language courses taught in English.

C) Complete the beginning level sequence in TWO Foreign Languages & take TWO Foreign Language courses taught in English.

Take 3 or more credit(s) from the following:

- Students must complete at least 3 credits to satisfy this requirement. Once one of the above options is completed, students request approval from the director and submit the 'CUE lang/culture form' found here: z.umn.edu/umdclaprograms

Advanced Writing Requirement (3 cr)

- WRIT 31xx - Adv Writing (3 cr)

Program Sub-plans

Students are required to complete one of the following sub-plans.

Certificate of Business Administration

After the successful completion of this sub-plan, students will receive a Certificate of Business Administration from LSBE. These
courses are provided in an online format and can be taken in any order. See class search for variable start dates of courses (1st half, 2nd half or full-term). Up to two of the following courses may be substituted with equivalent classroom classes. For additional changes or course substitutions students must meet with the CUE program director.

Once all courses are complete students must apply to receive the certificate, application details here: z.umn.edu/umdcert

Certificate of Business Administration (16 cr)
- BUS 2100 - Fundamentals of Accounting (2.0 cr)
- BUS 2200 - Fundamentals of Economics (2.0 cr)
- BUS 2300 - Fundamentals of Operations Management (2.0 cr)
- BUS 2400 - Fundamentals of Organizational Management (2.0 cr)
- BUS 2500 - Fundamentals of Applied Statistics (2.0 cr)
- BUS 2600 - Fundamentals of Financial Management (2.0 cr)
- BUS 2700 - Fundamentals of Marketing (2.0 cr)
- BUS 2800 - Fundamentals of Human Resource Management (2.0 cr)

Leadership Development
This sub-plan combines studies of entrepreneurship and management in the creative economy, language and cultural competencies and leadership development theory and practice. This track is particularly suited for students who intend to pursue the UMD Leadership Certificate with an emphasis on organizational leadership through the UMD Kirby Leadership Institute.

Take all the following courses. CUE program director approval is required for any course substitutions.

Leadership Development (16 cr)
- AMIN 3820 - Fundamentals of Tribal Project Management (3.0 cr)
- MGTS 1101 - Introduction to Business [LE CAT8] (3.0 cr)
- PSY 3211 - Group Dynamics (3.0 cr)
- take one course:
  - PSY 3520 - Introduction to Industrial/Organizational Psychology (4.0 cr)
  - or SOC 3831 - Organizations and Society (4.0 cr)
- take one course:
  - MGTS 4431 - Leadership Studies (3.0 cr)
  - or alternative course (pre-approved by the CUE program director)
Digital Writing, Literature and Design Minor

English Linguistics and Writing Studies

Program Delivery

This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

Core Requirements (13 cr)

- WRIT 1506 - Literacy, Technology and Society [LE CAT7, HUMANITIES] (3.0 cr)
- WRIT 4250 - New Media Writing (3.0 cr)
- ENGL 5270 - Digital Literature, Video Games and Online Culture (4.0 cr)
- WRIT 4230 - Web Design and Digital Culture (3.0 cr)
  or WRIT 4260 - Visual Rhetoric and Culture (3.0 cr)

Electives (6 - 8 cr)

Excludes WRIT 1120, 3100, 3110, 3121, 3130, 3140, 3150, 3160, 3180.
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
• ENGL 1xxx-5xxx
• WRIT 1xxx-5xxx
Duluth Campus

English B.A.

English

College of Liberal Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 37 to 38
• Degree: Bachelor of Arts

The English major develops student knowledge of literature and culture within English, American, and global contexts. Our students learn to read perceptively, think critically and creatively, write clearly and effectively, and engage meaningfully with the complex societies in which they live.

As a liberal arts program, the English major provides students with both knowledge and a set of transferable skills valued in a wide range of professions. While some UMD English graduates each year go on to teach English or attend graduate school in English, the majority find employment in other fields. Recent graduates of UMD’s English program have been accepted in various courses of graduate study including law, medicine, business, neuroscience, theology, and library science. Other graduates have found success in the following fields and roles: small business owner, editor, producer of plays, health claims representative, sales consultant, office manager, journalist, writer, property manager, bookkeeper, and assistant account executive.

Honors Requirements: Candidates must have a 3.20 overall GPA and 3.40 in the major. An honors paper or creative writing project must be completed in a 5xxx course or through independent study. Completed projects and papers must be approved by a sponsoring faculty member and the department honors committee. Students who wish to qualify for honors must contact the department at least one semester before graduation.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements

1) A second field of study is required (either a minor or another major).
2) Advanced writing requirement is met by the major requirements.
3) Study Abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

Introductory Course (3-4 cr)
Any ENGL 1xxx-2xxx level course may apply here. Take one course from the following list.

Take 1 or more course(s) from the following:
- ENGL 1001 - Great American Authors [LE CAT9, HUMANITIES] (3.0 cr)
- ENGL 1535 - King Arthur in History, Literature, and Art [LE CAT9, HUMANITIES] (4.0 cr)
- ENGL 1575 - 20th-Century Literature [LE CAT9, HUMANITIES] (4.0 cr)
- ENGL 1582 - Introduction to World Literatures [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)
- ENGL 1583 - Introductory Study of Major Topics in Contemporary African Literature [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)
- ENGL 1585 - Australian and New Zealand Literature and Culture [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)
- ENGL 1666 - Tales of Terror [LE CAT9, HUMANITIES] (4.0 cr)
- ENGL 1777 - Crime and Detective Fiction (4.0 cr)
- ENGL 1818 - Science Fiction in Film and Literature [HUMANITIES] (4.0 cr)
- ENGL 1907 - Introduction to Literature [LE CAT9, HUMANITIES] (3.0 cr)
- ENGL 2333 - Harry Potter: Texts and Contexts [HUMANITIES] (4.0 cr)
- ENGL 2535 - The Bible in Literature, Art and History [HUMANITIES, GLOBAL PER] (4.0 cr)
- ENGL 2571 - Contemporary Literature [LE CAT9, HUMANITIES, GLOBAL PER] (4.0 cr)
- ENGL 2581 - Women Writers [LE CAT9, LECD CAT09, HUMANITIES] (4.0 cr)
- ENGL 2601 - Reading Film [HUMANITIES] (4.0 cr)
- ENGL 2800 - Nature Writing [HUMANITIES] (4.0 cr)
- ENGL 2922 - The Art of the Memoir: Reading and Writing Memoir (4.0 cr)
- ENGL 3601 - Literature and Leadership (4.0 cr)

Required Courses (5 cr)
ENGL 2906 - Methods of Literary Study (4.0 cr)
ENGL 4909 - Senior Portfolio (1.0 cr)

Surveys (8 cr)
Take one course from each of the following two areas.

American Literature Survey
Take 1 or more course(s) from the following:
- ENGL 3563 - American Literature I [HUMANITIES, CDIVERSITY] (4.0 cr)
- ENGL 3564 - American Literature II [HUMANITIES, CDIVERSITY] (4.0 cr)
- ENGL 3573 - Survey of African American Literature [HUMANITIES, CDIVERSITY] (4.0 cr)

British Literature Survey
Take 1 or more course(s) from the following:
- ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
- ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)

Electives (12 cr)
Take one course from each of the following three areas. ENGL 5595 (Special Topics) and ENGL 5591 (Independent Study) may apply to an area with departmental approval.

Early Period Literature
(British Literature I (ENGL 3501) or American Literature I (ENGL 3563) can also fill this requirement, if it is not fulfilling a survey requirement.)
Take 1 or more course(s) from the following:
- ENGL 3223 - Shakespeare [LE CAT9, HUMANITIES] (4.0 cr)
- ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
- ENGL 3563 - American Literature I [HUMANITIES, CDIVERSITY] (4.0 cr)
- ENGL 5222 - Shakespeare (4.0 cr)
- ENGL 5295 - Special Topics in Early Period Literature (Various Titles to be Assigned) (4.0 cr)
- ENGL 5312 - Chaucer (4.0 cr)
- ENGL 5533 - Studies in English Literature Before 1800 (4.0 cr)
- ENGL 5541 - Restoration and 18th-Century Literature (4.0 cr)
- ENGL 5572 - American Renaissance (4.0 cr)
- ENGL 5574 - Studies in American Literature to 1914 (4.0 cr)
- ENGL 5661 - Publishing the Middle Ages (4.0 cr)
- ENGL 5662 - The Making of a Major Author: The Scholarly Edition in 17th- and 18th-Century England (4.0 cr)

**Later Period Literature**

(British Literature II (ENGL 3502) or American Literature II (ENGL 3564) can also fill this requirement, if it is not fulfilling a survey requirement.)

Take 1 or more course(s) from the following:

- ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
- ENGL 3564 - American Literature II [HUMANITIES, CDIVERSITY] (4.0 cr)
- ENGL 3574 - Reconstituting the Past in African Diaspora Literature (4.0 cr)
- ENGL 5395 - Special Topics in Late-Period Literature (various titles to be assigned) (4.0 cr)
- ENGL 5561 - English Romanticism (4.0 cr)
- ENGL 5562 - Victorian Literature (4.0 cr)
- ENGL 5564 - Studies in British Literature after 1900 (4.0 cr)
- ENGL 5575 - Studies in American Literature after 1914 (4.0 cr)
- ENGL 5584 - Mapping Postcolonial Literature (4.0 cr)
- ENGL 5663 - Readers and the History of Books (4.0 cr)
- ENGL 5665 - The American Literary Marketplace (4.0 cr)

**Genre and Media Studies**

Take 1 or more course(s) from the following:

- ENGL 3115 - Writing Fiction (4.0 cr)
- ENGL 3121 - Writing Poetry (4.0 cr)
- ENGL 3333 - Children's Literature: Texts and Contexts (4.0 cr)
- ENGL 3411 - The Modern Short Story (4.0 cr)
- ENGL 4292 - Literature into Film (4.0 cr)
- ENGL 4300 - Shakespeare in England [GLOBAL PER] (4.0 cr)
- ENGL 4375 - Drama (4.0 cr)
- ENGL 5270 - Digital Literature, Video Games and Online Culture (4.0 cr)
- ENGL 5375 - Modern Poetry (4.0 cr)
- ENGL 5495 - Special Topics in Genre and Media Studies (various titles to be assigned) (4.0 cr)
- ENGL 5580 - The Novel (4.0 cr)

**English Seminars (8 cr)**

Choose from the 4xxx or 5xxx courses listed above that are not fulfilling other requirements as well as from the following courses. Take 2 or more course(s) from the following:

- ENGL 4802 - English Language for Educators (4.0 cr)
- ENGL 5116 - Advanced Writing of Fiction (4.0 cr)
- ENGL 5222 - Advanced Writing of Poetry (4.0 cr)
- ENGL 5444 - Childhood in Literature, History and Culture (4.0 cr)
- ENGL 5577 - Major American Authors (4.0 cr)
- ENGL 5591 - Independent Study (1.0 - 5.0 cr)
- ENGL 5595 - Special Topics: (Various Titles to be Assigned) (1.0 - 5.0 cr)
- ENGL 5821 - History of the English Language (4.0 cr)

**Program Sub-plans**

A sub-plan is not required for this program.
Duluth Campus
English Minor
English
College of Liberal Arts

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 20

The English minor introduces students to a wide range of American, British, and world literatures.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

English Core (4 cr)
Take the following course:
ENGL 1582 - Introduction to World Literatures [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)

English Survey Course (4 cr)
Only one additional survey course may be applicable to an elective area.
Take no more than 1 course(s) from the following:
• ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
• ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
• ENGL 3563 - American Literature I [HUMANITIES, CDIVERSITY] (4.0 cr)
• ENGL 3564 - American Literature II [HUMANITIES, CDIVERSITY] (4.0 cr)

English Electives at the 2xxx-3xxx level (4 cr)
Most ENGL 2xxx-3xxx level courses apply here.
Take no more than 1 course(s) from the following:
• ENGL 2333 - Harry Potter: Texts and Contexts [HUMANITIES] (4.0 cr)
• ENGL 2535 - The Bible in Literature, Art and History [HUMANITIES, GLOBAL PER] (4.0 cr)
• ENGL 2571 - Contemporary Literature [LE CAT9, HUMANITIES, GLOBAL PER] (4.0 cr)
• ENGL 2581 - Women Writers [LE CAT9, LECD CAT09, HUMANITIES] (4.0 cr)
• ENGL 2601 - Reading Film [HUMANITIES] (4.0 cr)
• ENGL 2800 - Nature Writing [HUMANITIES] (4.0 cr)
• ENGL 2906 - Methods of Literary Study (4.0 cr)
• ENGL 2922 - The Art of the Memoir: Reading and Writing Memoir (4.0 cr)
• ENGL 3115 - Writing Fiction (4.0 cr)
• ENGL 3121 - Writing Poetry (4.0 cr)
• ENGL 3223 - Shakespeare [LE CAT9, HUMANITIES] (4.0 cr)
• ENGL 3333 - Children's Literature: Texts and Contexts (4.0 cr)
• ENGL 3411 - The Modern Short Story (4.0 cr)
• ENGL 3573 - Survey of African American Literature [HUMANITIES, CDIVERSITY] (4.0 cr)
• ENGL 3574 - Reconstituting the Past in African Diaspora Literature (4.0 cr)
• ENGL 3601 - Literature and Leadership (4.0 cr)

English Electives at the 4xxx-5xxx level (8 cr)
Most ENGL 4xxx-5xxx level courses apply here. This excludes ENGL 4097/5097-Internship and ENGL 4931-Practicum.
Take 8 or more credit(s) from the following:
• ENGL 4292 - Literature into Film (4.0 cr)
• ENGL 4300 - Shakespeare in England [GLOBAL PER] (4.0 cr)
• ENGL 4375 - Drama (4.0 cr)
• ENGL 4802 - English Language for Educators (4.0 cr)
• ENGL 4902 - Teaching Language, Cognition, and Writing (4.0 cr)
• ENGL 4909 - Senior Portfolio (1.0 cr)
• ENGL 4922 - Teaching Literature and Communication (4.0 cr)
• ENGL 5116 - Advanced Writing of Fiction (4.0 cr)
- ENGL 5122 - Advanced Writing of Poetry (4.0 cr)
- ENGL 5222 - Shakespeare (4.0 cr)
- ENGL 5270 - Digital Literature, Video Games and Online Culture (4.0 cr)
- ENGL 5295 - Special Topics in Early Period Literature (Various Titles to be Assigned) (4.0 cr)
- ENGL 5312 - Chaucer (4.0 cr)
- ENGL 5375 - Modern Poetry (4.0 cr)
- ENGL 5395 - Special Topics in Late-Period Literature (Various titles to be assigned) (4.0 cr)
- ENGL 5444 - Childhood in Literature, History and Culture (4.0 cr)
- ENGL 5495 - Special Topics in Genre and Media Studies (Various titles to be assigned) (4.0 cr)
- ENGL 5533 - Studies in English Literature Before 1800 (4.0 cr)
- ENGL 5541 - Restoration and 18th-Century Literature (4.0 cr)
- ENGL 5561 - English Romanticism (4.0 cr)
- ENGL 5562 - Victorian Literature (4.0 cr)
- ENGL 5564 - Studies in British Literature after 1900 (4.0 cr)
- ENGL 5572 - American Renaissance (4.0 cr)
- ENGL 5574 - Studies in American Literature to 1914 (4.0 cr)
- ENGL 5575 - Studies in American Literature after 1914 (4.0 cr)
- ENGL 5577 - Major American Authors (4.0 cr)
- ENGL 5580 - The Novel (4.0 cr)
- ENGL 5584 - Mapping Postcolonial Literature (4.0 cr)
- ENGL 5591 - Independent Study (1.0 - 5.0 cr)
- ENGL 5595 - Special Topics: (Various Titles to be Assigned) (1.0 - 5.0 cr)
- ENGL 5661 - Publishing the Middle Ages (4.0 cr)
- ENGL 5662 - The Making of a Major Author: The Scholarly Edition in 17th- and 18th-Century England (4.0 cr)
- ENGL 5663 - Readers and the History of Books (4.0 cr)
- ENGL 5664 - Small Presses, Little Magazines, and Modernism (4.0 cr)
- ENGL 5665 - The American Literary Marketplace (4.0 cr)
- ENGL 5802 - English Language for Educators (4.0 cr)
- ENGL 5821 - History of the English Language (4.0 cr)
- ENGL 5902 - Teaching Language, Cognition, and Writing (4.0 cr)
Duluth Campus
Environment, Sustainability & Geography B.A.
Geography & Philosophy
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 44 to 45
- Degree: Bachelor of Arts

The purpose of the environment, sustainability and geography degree is to prepare students to create sustainable communities for present and future generations. This program provides students with the tools to understand the physical and social systems of the earth to become informed change makers locally and globally. Sustainability challenges are all around us: from climate change, to vulnerabilities in the industrial food system, to the way we design cities. One of the fundamental hurdles in a transition toward sustainability is bridging the ecological and social sciences with decision-making. The program trains students to analyze the interwoven nature of social and ecological systems, and translate that knowledge into policies to enact change. Meaningful engagement with the world outside the classroom prepares students to comprehend and address these challenges. To this end, the program provides students with theoretical and hands-on instruction in ecological and social processes, mentoring, as well as opportunities for professional and real-world experiences through internships and applied research.

The program has three tracks that students may choose from: 1) Environment and Sustainability, 2) Geography, 3) Urban and Regional Studies.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the [Liberal Education Program](#).
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
1) A second field of study (either a minor or another major).

2) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

Core Requirements (16 cr)
- ES 2005 - Environment and Sustainability [SUSTAIN] (3.0 cr)
- ES 4612 - Field Techniques and Research Design (3.0 cr)
- GEOG 1414 - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
- GIS 2552 - Mapping Our World [LOGIC & QR] (3.0 cr)

Advanced Writing Requirement (3 cr)
- WRIT 31xx - Adv Writing (3 cr)

Electives (9 cr)
To fulfill this requirement students take 3 courses for at least 9 credits. No more than 3 credits at the 2xxx level. No more than 3 credits of independent study, teaching assistant, honors projects in the following courses: ES 4091, 4910, 4999; GEOG 3991, 4910, 4999, 5991; URS 3991, 4910, 4999.

Take 0 - 3 credit(s) from the following:
- ES 2xxx, GEOG 2xxx, URS 2xxx

Take 6 or more credit(s) from the following:
- ES 3xxx - 4xxx
- GEOG 3xxx - 5xxx
- URS 3xxx - 4xxx

Program Sub-plans
Students are required to complete one of the following sub-plans.

Environment and Sustainability
This track emphasizes the ecological and societal dimensions of sustainability, specifically, the food-energy-water nexus. Students develop the skills to create solutions that meet material human needs while preserving natural resources and ecosystems.

Core (9 cr)
- ES 3100 - Sustainable Food Systems [SUSTAIN] (3.0 cr)
- GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
- GEOG 3401 - Weather and Climate (3.0 cr)
  or GEOG 4446 - Water Processes and Management (3.0 cr)

Internship (3 cr)
- ES 4097 - Internship (3.0 cr)

Capstone (3 cr)
- ES 4005 - Environmental Policy (3.0 cr)

Geography
This track emphasizes a holistic and spatial approach to both human and physical systems. Students explore how humans transform the earth, with an emphasis on three broad streams of geographic thought: human-environment interaction, human systems, and physical systems.

Core (9 - 10 cr)

Human-environment Interaction
- GEOG 2306 - Environmental Conservation [LE CAT8, SUSTAIN] (3.0 cr)
  or GEOG 3411 - Human Environment Interactions (3.0 cr)

Human Systems
- GEOG 2313 - Economic Geography [LE CAT6, SOC SCI] (3.0 cr)
  or GEOG 3334 - Urban Geography (3.0 cr)
  or GEOG 4393 - Political Geography (3.0 cr)

Physical Systems
- GEOG 3401 - Weather and Climate (3.0 cr)
  or GEOG 4446 - Water Processes and Management (3.0 cr)
  or GEOG 4451 - The Geography of Soils (4.0 cr)

Internship (3 cr)
GEOG 3997 - Internship in Geography (1.0 - 6.0 cr)
Capstone (3 cr)
GEOG 4803 - Geographic Thought (3.0 cr)

Urban and Regional Studies
This track emphasizes the social and cultural dimensions of urbanization, addressing how our increasingly urban world can organize in just and cohesive societies.

Core (9 cr)
ARTH 2300 - The City as a Work of Art [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
GEOG 3334 - Urban Geography (3.0 cr)
GEOG 3335 - Urban Planning (3.0 cr)
Internship (3 cr)
URS 3097 - Internship in Urban and Regional Studies (1.0 - 6.0 cr)
Capstone (3 cr)
URS 4001 - Cities and Citizenship (3.0 cr)
Environment, Sustainability & Geography Minor

Geography & Philosophy

College of Liberal Arts

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 22

The purpose of the environment, sustainability and geography program is to prepare students to create sustainable communities for present and future generations. This program provides students with the tools to understand the physical and social systems of the earth to become informed change makers locally and globally. Sustainability challenges are all around us: from climate change, to vulnerabilities in the industrial food system, to the way we design cities. One of the fundamental hurdles in a transition toward sustainability is bridging the ecological and social sciences with decision making. The program trains students to analyze the interwoven nature of social and ecological systems, and translate that knowledge into policies to enact change. Meaningful engagement with the world outside the classroom prepares students to comprehend and address these challenges. To this end, the program provides students with theoretical and hands-on instruction in ecological and social processes, mentoring, as well as opportunities for professional and real-world experiences through internships and applied research.

Program Delivery

This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

Core Requirements (13 cr)

- **ES 2005** - Environment and Sustainability [SUSTAIN] (3.0 cr)
- **GEOG 1205** - Our Globalizing World [SOC SCI, GLOBALPER] (3.0 cr)
- **GEOG 1414** - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
- **GIS 2552** - Mapping Our World [LOGIC & QR] (3.0 cr)

Electives (9 cr)

To fulfill this requirement students take at least 3 courses for at least 9 credits. No more than 3 credits at the 2xxx level. No more than 3 credits of independent study, teaching assistant, honors projects in the following courses: ES 4091, 4910, 4999; GEOG 3991, 4910, 4999, 5991; URS 3991, 4910, 4999.

Take 0 - 3 credit(s) from the following:
• ES 2xxx, GEOG 2xxx, URS 2xxx

Take 6 or more credit(s) from the following:
• ES 3xxx - 4xxx
• GEOG 3xxx - 5xxx
• URS 3xxx - 4xxx
Duluth Campus
French Studies B.A.
World Languages & Cultures
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 27 to 43
- Study abroad will be strongly encouraged for French Studies majors in a variety of sites, to be determined by student interest and focus, throughout the French-speaking world. Our program will work to facilitate the achievement of University of Minnesota system-wide goals, which call for 50 percent of students to participate in a study abroad experience.
- Degree: Bachelor of Arts

This program prepares students to thrive as globally competent citizens through an in-depth encounter with French and Francophone cultures and literature. Majors develop language proficiency and communication skills as they study literature, films, and cultures of the French-speaking world. Such studies have long been a core discipline in the liberal arts due to the rich intellectual, political, artistic, technological, and scientific achievements of a culture whose language is spoken in many parts of the world. In view of northeastern Minnesota's extensive French heritage and proximity to bilingual Canada, the field of French studies offers local as well as global perspectives that can be applied in a wide variety of career choices.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits, and current UMD students who change colleges to CLA, are exempt from this requirement. New first-year students with 24 or more PSEO credits may request a waiver from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A second field of study (either a minor or another major).
2) Two elective courses applicable to the major must be taken through UMD.

3) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

4) Oral proficiency exam.

Note: Students pursuing both the French Studies B.A. and the Teaching French B.A.A. degrees must satisfactorily complete 12 non-overlapping upper division credits of French electives over and above the requirements for the B.A.A. to receive both degrees.

Core Courses (0-16 cr)
Students with language study may be exempt from some core requirements and should consult the department about placement. Students usually complete the advanced French Studies language course before other upper-division courses that emphasize literature and culture.

FR 1101 - Beginning French I [LE CAT3, COMM & LAN] (4.0 cr)
FR 1102 - Beginning French II [LE CAT3, COMM & LAN] (4.0 cr)
FR 1201 - Intermediate French I [LE CAT3, COMM & LAN] (4.0 cr)
FR 1202 - Intermediate French II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Upper Division Electives (23 cr)
Most FR 3xxx-4xxx courses apply here. To enroll in these courses a student must have earned a grade of C or better in 1202, or be concurrently enrolled in 1202 or obtain instructor consent. With advisor consent, some upper-division French courses may be transferred and/or earned abroad, but at least two courses must be taken through UMD. Students majoring in French Studies may apply both French courses taught in English (FR 2315 & 3550) towards the major.

Take 23 or more credit(s) from the following:

- FR 2315 - French Cinema [LE CAT9, LEIP CAT09, HUMANITIES] (4.0 cr)
- FR 3302 - Advanced French Composition and Conversation [COMM & LAN] (4.0 cr)
- FR 3305 - French Cuisine: Exploring French Culture Through Food [HUMANITIES, GLOBAL PER] (4.0 cr)
- FR 3310 - Survey: Essays, Short Stories, Poetry in the French Language [HUMANITIES] (4.0 cr)
- FR 3550 - The History of Paris: Evolution and Revolution [HUMANITIES] (4.0 cr)
- FR 3591 - Independent Study (1.0 - 4.0 cr)
- FR 4018 - Studies in Francophone Cultures and Literature [HUMANITIES, GLOBAL PER] (4.0 cr)
- FR 4095 - Special Topics (Various Titles to be Assigned) (4.0 cr)
- FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
- FR 4492 - Modern French Literature (19th-21st century) [HUMANITIES] (4.0 cr)

Optional Elective
One of the following courses (taught in English) applies to the "23 elective credits." With prior approval from an advisor, selected courses may be taken in another department or program if related to the major.

Take 0 - 1 course(s) from the following:

- ARTH 2300 - The City as a Work of Art [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
- ARTH 3340 - Baroque and Rococo: European Art & Architecture 1550 - 1750 (3.0 cr)
- ARTH 3360 - Art and Social Change in Europe, Russia, and the United States (3.0 cr)
- ARTH 3361 - Being and Becoming Modern: European Art 1855 - 1955 (3.0 cr)
- ARTH 3370 - Dreamworld and Catastrophe: Art and Visual Culture in the Cold War (3.0 cr)
- CUE 3001 - Foundations of Cultural Entrepreneurship I (3.0 cr)
- CUE 3002 - Foundations of Cultural Entrepreneurship II (3.0 cr)
- HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
- HIST 3615 - Modern Africa (4.0 cr)
- HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
- LANG 2050 - The Digital Humanities: Language as Interface [HUMANITIES] (4.0 cr)
- POL 3517 - Western European Political Systems (4.0 cr)

Advanced Writing Requirement (3 cr)
WRIT 3100 is recommended. Any WRIT 31xx course is applicable to the major.
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus
French Studies Minor
World Languages & Cultures
College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12 to 28
- Study abroad will be strongly encouraged, to be determined by student interest and focus, throughout the French-speaking world.

This minor complements any degree. French has been the language of a major world culture for centuries and is the traditional language of the arts and philosophy. As global commerce and communication become the norm, French shares status with English as one of the two official languages of the European community and provides a solid basis for careers in business, law, human services, medicine and diplomacy.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Core Courses (0-16 cr)
Students with previous language study may be exempt from some core requirements and should consult the department about placement.

- FR 1101 - Beginning French I [LE CAT3, COMM & LAN] (4.0 cr)
- FR 1102 - Beginning French II [LE CAT3, COMM & LAN] (4.0 cr)
- FR 1201 - Intermediate French I [LE CAT3, COMM & LAN] (4.0 cr)
- FR 1202 - Intermediate French II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Electives (12 cr)
Most FR 3xxx-4xxx courses apply here. To enroll in these courses, a student must have earned a grade of C or better in 1202, or be concurrently enrolled in 1202, or have instructor's consent. Select French courses beyond FR 1202. With advisor's consent, courses taken abroad may count toward the minor.

- Take 12 or more credit(s) from the following:
  - FR 3302 - Advanced French Composition and Conversation [COMM & LAN] (4.0 cr)
  - FR 3305 - French Cuisine: Exploring French Culture Through Food [HUMANITIES, GLOBAL PER] (4.0 cr)
  - FR 3310 - Survey: Essays, Short Stories, Poetry in the French Language [HUMANITIES] (4.0 cr)
  - FR 3591 - Independent Study (1.0 - 4.0 cr)
  - FR 4018 - Studies in Francophone Cultures and Literature [HUMANITIES, GLOBAL PER] (4.0 cr)
  - FR 4095 - Special Topics (Various Titles to be Assigned) (4.0 cr)
  - FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
  - FR 4492 - Modern French Literature (19th-21st century) [HUMANITIES] (4.0 cr)
  - One of the following may apply (taught in English):
    - Take 0 - 1 course(s) from the following:
      - FR 2315 - French Cinema [LE CAT9, LEIP CAT09, HUMANITIES] (4.0 cr)
      - FR 3550 - The History of Paris: Evolution and Revolution [HUMANITIES] (4.0 cr)
### Duluth Campus

**Geographic Information Science B.S.**

**Geography & Philosophy**

**College of Liberal Arts**

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 57 to 59
- Degree: Bachelor of Science

Because of the growing awareness across disciplines of the strategic value of Geographic Information Science (GIS), particularly through its ability to understand better the complexity of economic, environmental and social systems, the US Department of Labor identifies GIS as one of nine high growth industries. For example, GIS has been instrumental to emergency managers in the face of natural hazards, who utilize it to determine how communities can best mitigate such disasters. Urban planners utilize GIS to optimize existing systems and services, while forecasting where they will be most needed in the future based on emerging population and growth trends. Remote sensing allows land managers to monitor environmental changes via satellite and drone technologies, and inform adaptation strategies for industry and communities alike. Spatial analysis provides epidemiologists with the tools necessary to track and forecast the spread of diseases, helping health care officials limit their impact. In each of these cases, GIS professionals use geospatial technologies to create sustainable solutions to environmental, economic, and societal problems.

The mission of the GIS BS program at UMD is to train future GIS professionals by providing theoretical and practical instruction, modeling and mentoring, and real-world professional experiences, guided by the GIS&T body of knowledge and the GISP code of ethics.

Students learn both the basic and the latest methods to collect, manage, analyze and visualize data, including scripting methods for web-delivery of geographical information and automation of geo-processes. And they learn how to put these methods into action through application classes, community-based research projects and internships.

The GIS program is assessed annually by students, faculty and GIS professionals conjointly, to ensure it remains relevant and keeps in touch with the fast paced evolutions of the field.

The major interweaves well with disciplines such as geography, urban and regional studies, computer science, statistics, mathematics, history, political science, anthropology, sociology, criminology, geology, biology, chemistry, engineering, and environmental studies. Because of the interdisciplinary nature of GIS applications, students are encouraged to double major.

### Program Delivery

This program is available:

- via classroom (the majority of instruction is face-to-face)

### Admission Requirements

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](https://www.admissions.umn.edu).

**Required prerequisites**

**Introductory Requirement (1 cr)**

Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.

**UST 1000 - UMD Seminar** (1.0 - 2.0 cr)

### General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the [Liberal Education Program](https://www.liberal.umn.edu).

3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A second field of study (either a minor or second major) is required.

2) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

Supporting Core (21 - 22 cr)

GEOG 1202 - World Regional Geography [LE CAT8, LEIP CAT08, GLOBAL PER] (3.0 cr)
  or GEOG 1205 - Our Globalizing World [SOC SCI, GLOBAL PER] (3.0 cr)
  or GEOG 1304 - Human Geography [LE CAT6, LECD CAT06, SOC SCI] (3.0 cr)
GEOG 1414 - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
  or GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
  or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
GIS 2552 - Mapping Our World [LOGIC & QR] (3.0 cr)
ES 4612 - Field Techniques and Research Design (3.0 cr)
  or GEOG 4612 - Field Techniques (4.0 cr)
STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)

GIS Core (24 - 25 cr)

GIS 3563 - Geographic Information Science I: Theory and Analysis (4.0 cr)
GIS 3564 - Geographic Information Science II: Applied GIS (4.0 cr)
GIS 3580 - Earth Imagery (4.0 cr)
GIS 4586 - Geoprocessing with Python (4.0 cr)
  or GIS 4533 - Distributed Geographic Information Services: Mobile and Web Based Solutions (4.0 cr)
GIS 4585 - Applied Statistics in GIS (4.0 cr)
  or GIS 5581 - Digital Image Processing and Analysis (4.0 cr)
GIS 3597 - Internship in GIS (3.0 - 4.0 cr)
GIS 4909 - Professional Preparedness (1.0 cr)

GIS Electives (8 cr)

Courses that satisfy the Supporting Core or GIS Core cannot also apply within the GIS Electives; however additional courses taken in either core may apply as GIS Electives.

Take 2 or more course(s) totaling 8 or more credit(s) from the following:
*GIS 2xxx - 5xxx

Advanced Writing Requirement (3 cr)

WRIT 31xx - Adv Writing (3 cr)
Duluth Campus
Geographic Information Science Certificate
Geography & Philosophy
College of Liberal Arts

- Program Type: Undergraduate credit certificate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 19
- Degree: Geographic Information Science Certificate

The certificate in Geographic Information Science has as its core the study and use of geographic information systems (GIS). Central to this program are the theoretical and applied fundamentals of the collection, management, analysis and representation of spatial data. The program builds on this core by exploring both traditional and novel methods for geo-visualization. Methods include teaching about various GIS and remote sensing technologies used to collect and analyze spatial data and how to use these technologies, critically discussing the implications of geo-spatial technologies on individuals and society, demonstrating how geo-spatial technologies are used effectively in urban and regional planning processes; and by exploration of applications of GIS to environmental, resource and policy/management issues.

The five-course series offers students the opportunity to expand their knowledge and expertise in the area of Geographic Information Science (GISci). Participants in the certificate will receive the theoretical and technical education needed to acquire, manage and critically analyze and represent geo-referenced data. The program offers basic and advanced courses in map design and geo-visualization, geographic information systems, remote sensing and geo-spatial technologies in general.

This certificate is not eligible for financial aid.

Students pursuing the GISci major or minor are not eligible for the GISci certificate program.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A full understanding of basic computer use is expected.
A cumulative U of MN GPA of at least 2.00 is required for admission.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements

Required Courses (11 cr)
- GIS 2552 - Mapping Our World [LOGIC & QR] (3.0 cr)
- GIS 3563 - Geographic Information Science I: Theory and Analysis (4.0 cr)
- GIS 3564 - Geographic Information Science II: Applied GIS (4.0 cr)

Electives (8 cr)
Take 2 or more course(s) from the following:
- GEOG 3532 - Map Design and Geographic Visualization (4.0 cr)
- GIS 3580 - Earth Imagery (4.0 cr)
- GIS 4533 - Distributed Geographic Information Services: Mobile and Web Based Solutions (4.0 cr)
- GIS 4585 - Applied Statistics in GIS (4.0 cr)
- GIS 5571 - Geographic Information Science in Urban Analysis (4.0 cr)
- GIS 5572 - Environmental Application of GIS (4.0 cr)
- GIS 5573 - GIScience in Regional Sustainability Applications (4.0 cr)
- GIS 5581 - Digital Image Processing and Analysis (4.0 cr)
Duluth Campus

Geographic Information Science Minor

Geography & Philosophy

College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 18 to 23

The minor in geographic information science has as its core the study and use of geographic information systems (GIS). Central to this program are the theoretical and applied fundamentals of the collection, management, analysis, and representation of spatial data. The program builds on this core by exploring both traditional and novel methods for geo-visualization. Methods include teaching about various remote sensing technologies used to collect and classify remotely sensed data and how to use these technologies, critically discussing the implications of geo-spatial technologies on individuals and society, demonstrating how geo-spatial technologies are used effectively in urban and regional planning processes, and by exploring applications of GIS to environmental, resource and policy/management issues. The minor interweaves well with majors in anthropology, biology, chemistry, computer science, criminology, engineering, environmental sciences, geology, history, mathematics, political science, sociology, and statistics.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Core (6-7 cr)
- GIS 2552 - Mapping Our World [LOGIC & QR] (3.0 cr)
- GEOG 1205 - Our Globalizing World [SOC SCI, GLOBAL PER] (3.0 cr)
  or GEOG 1304 - Human Geography [LE CAT6, LEC CAT06, SOC SCI] (3.0 cr)
  or GEOG 1414 - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)

Information Science Requirement (4-8 cr)
- GIS 3563 - Geographic Information Science I: Theory and Analysis (4.0 cr)
- GIS 3564 - Geographic Information Science II: Applied GIS (4.0 cr)
  or Graduate Level Course (consent required)
  - GIS 4565 - Geographic Information Science Intensive: Theory, Analysis, and Applications (4.0 cr)

Electives (8 cr)

Students must take a minimum of 2 courses or more to reach 8 credits. Other GIS 3xxx-5xxx level courses may apply here. (GIS 4565 is excluded from this area.)

Take 2 or more course(s) from the following:
- GEOG 3532 - Map Design and Geographic Visualization (4.0 cr)
- GIS 3580 - Earth Imagery (4.0 cr)
- GIS 3591 - Independent Study in GIS (1.0 - 3.0 cr)
- GIS 3597 - Internship in GIS (3.0 - 4.0 cr)
- GIS 3xxx
- GIS 4533 - Distributed Geographic Information Services: Mobile and Web Based Solutions (4.0 cr)
- GIS 4585 - Applied Statistics in GIS (4.0 cr)
- GIS 4586 - Geoprocessing with Python (4.0 cr)
- GIS 4xxx
- GIS 5571 - Geographic Information Science in Urban Analysis (4.0 cr)
- GIS 5572 - Environmental Application of GIS (4.0 cr)
- GIS 5573 - GIScience in Regional Sustainability Applications (4.0 cr)
- GIS 5581 - Digital Image Processing and Analysis (4.0 cr)
- GIS 5591 - Independent Study in GIS (1.0 - 3.0 cr)
- GIS 5xxx
Duluth Campus

German Studies B.A.
World Languages & Cultures
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 27 to 44
- Study abroad is strongly encouraged. In-depth study of language and culture in a host country vastly improves language proficiency and intercultural competence.
- Degree: Bachelor of Arts

The German studies major introduces and explores the culture of German-speaking countries, with an emphasis on both cultural history and contemporary issues. The political and social backgrounds of these cultures are seen through literature, the arts, history, and media. As global commerce and communication become the norm, German Studies provides a solid basis for careers from business to law, human services to diplomacy, STEM fields to the arts. Taught in German, this program also offers a solid foundation in the language and the development of intercultural competencies. German majors are encouraged to declare a second major in a complementary field.

Honors requirements: Departmental honors will be granted to students according to the following process: Students who achieve a 3.30 GPA in upper division language courses at UMD will be invited by program faculty to submit a portfolio of excellent work done in the language for consideration by faculty in the program. The faculty then will decide if honors are to be awarded based on that portfolio.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements

1) A second field of study (either a minor or another major).

2) Three elective courses (12 credits) applicable to the major must be taken through UMD.

3) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

4) Oral proficiency exam.

Note: Students pursuing both the German studies BA and the teaching German BAA must satisfactorily complete 12 non-overlapping upper division credits of German electives over and above the requirements for the BAA to receive both degrees.

Core (0-16 cr)

Students may be exempted from all or part of the core requirements if they have previously studied German. See the department for placement information. Students who enroll directly in upper-level courses may have the option to receive credit for GER 1201 & 1202.

GER 1101 - Beginning German I [LE CAT3, COMM & LAN] (4.0 cr)
GER 1102 - Beginning German II [LE CAT3, COMM & LAN] (4.0 cr)
GER 1201 - Intermediate German I [LE CAT3, COMM & LAN] (4.0 cr)
GER 1202 - Intermediate German II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Upper Division Electives (23-24 cr)

Most courses at the GER 3xxx level or above apply here. To enroll in these courses a student must have earned a grade of C or better in 1202, or have instructor's permission. With advisor consent, some upper-division German courses may be transferred and/or taken abroad, but at least three courses (12 credits) must be taken through UMD.

Take 23 or more credit(s) from the following:

- GER 3040 - German Culture in Germany - Study Abroad [GLOBAL PER] (4.0 cr)
- GER 3302 - Advanced Composition and Conversation [COMM & LAN] (4.0 cr)
- GER 3401 - Texts and Contexts in German Speaking World [HUMANITIES] (4.0 cr)
- GER 3403 - Page and Stage: German Theater and Performance [FINE ARTS] (4.0 cr)
- GER 3407 - Sustainability in German-speaking Cultures [SUSTAIN] (4.0 cr)
- GER 3591 - Independent Study (1.0 - 4.0 cr)
- GER 3601 - German Studies I: Knights to Nationalisms [HUMANITIES] (4.0 cr)
- GER 3602 - German Studies II: From the Rise of the Reich to the Fall of the Wall [HUMANITIES] (4.0 cr)
- GER 3xxx
- GER 4095 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
- GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
- GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
- GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
- GER 4502 - German Modernisms: From Vienna to Berlin [HUMANITIES] (4.0 cr)
- GER 4591 - Independent Study (1.0 - 4.0 cr)
- GER 4xxx

Optional Elective (3 cr)

One of the following courses (taught in English) applies to the '23-24 elective credits'. With prior approval from an advisor, selected courses may be taken in another department or program if related to the major.

- ARTH 3361 - Being and Becoming Modern: European Art 1855 - 1955 (3.0 cr)
- ARTH 3370 - Dreamworld and Catastrophe: Art and Visual Culture in the Cold War (3.0 cr)
- CUE 3001 - Foundations of Cultural Entrepreneurship I (3.0 cr)
- CUE 3002 - Foundations of Cultural Entrepreneurship II (3.0 cr)
- CUE 4002 - Managing Cultural Organizations (3.0 cr)
- GER 2040 Berlin: Myth, Legend, Reality (3.0 cr) (summer only)
- HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
- HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
- LANG 2050 - The Digital Humanities: Language as Interface [HUMANITIES] (4.0 cr)
- LANG 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
- POL 3517 - Western European Political Systems (4.0 cr)

Advanced Writing Requirement (3 cr)

WRIT 31xx - Adv Writing (3 cr)
Duluth Campus

German Studies Minor
World Languages & Cultures
College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12 to 28
- Study abroad is strongly encouraged. In-depth study of language and culture in a host country vastly improves language proficiency and intercultural competence.

The German Studies minor complements any degree. German has been the language of a major world culture for centuries and is the traditional language of science, medicine, philosophy, and the arts. As global commerce and communication become the norm, German Studies provides a solid basis for careers in business, law, human services, and diplomacy. Taught in German, this program offers a solid foundation in the language.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Core (0-16 cr)
Students may be exempted from all or part of the core requirements if they have previously studied German. See the department for placement information. Students who enroll directly in upper-level courses may have the option to receive credit for GER 1201 & 1202.

GER 1101 - Beginning German I [LE CAT3, COMM & LAN] (4.0 cr)
GER 1102 - Beginning German II [LE CAT3, COMM & LAN] (4.0 cr)
GER 1201 - Intermediate German I [LE CAT3, COMM & LAN] (4.0 cr)
GER 1202 - Intermediate German II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Electives (12 cr)
Most GER 3xxx level or above courses apply here. To enroll in these courses a student must have earned a grade of C or better in 1202, or have instructor's consent. With advisor's consent, courses taken abroad may count toward the minor.

Take 12 or more credit(s) from the following:
-GER 3040 - German Culture in Germany - Study Abroad [GLOBAL PER] (4.0 cr)
-GER 3302 - Advanced Composition and Conversation [COMM & LAN] (4.0 cr)
-GER 3401 - Texts and Contexts in German Speaking World [HUMANITIES] (4.0 cr)
-GER 3403 - Page and Stage: German Theater and Performance [FINE ARTS] (4.0 cr)
-GER 3407 - Sustainability in German-speaking Cultures [SUSTAIN] (4.0 cr)
-GER 3591 - Independent Study (1.0 - 4.0 cr)
-GER 3601 - German Studies I: Knights to Nationalisms [HUMANITIES] (4.0 cr)
-GER 3602 - German Studies II: From the Rise of the Reich to the Fall of the Wall [HUMANITIES] (4.0 cr)
-GER 3xxx
-GER 4095 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
-GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
-GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
-GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
-GER 4502 - German Modernisms: From Vienna to Berlin [HUMANITIES] (4.0 cr)
-GER 4591 - Independent Study (1.0 - 4.0 cr)
-GER 4xxx
Duluth Campus
Hispanic Studies B.A.
World Languages & Cultures
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 27 to 48
- Study abroad will be strongly encouraged, to be determined by student interest and focus, throughout the Spanish-speaking world.
- Degree: Bachelor of Arts

The Hispanic studies program fosters the development of cross-cultural competency and broader world perspectives through the study of history, cultural production and texts of Spanish-speaking communities and cultures, and their concomitant inherent diversity. This major presupposes the acquisition of Spanish language in order to carry out coursework in the study, analysis and understanding of literary texts and cultural products from Spain, Latin America, and United States Latino communities. It prepares students for graduate or professional school programs such as law, or for work in government or with agencies and businesses having international ties. It provides students with a traditional liberal education.

Honors requirements: Departmental honors will be awarded to students according to the following process: Students who achieve a 3.30 GPA in upper division language courses at UMD will be invited by program faculty to submit a portfolio of excellent work done in the language for consideration by faculty in the program. The faculty then will decide if honors will be awarded, based on that portfolio.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements

1) A second field of study (either a minor or another major). Students majoring in Hispanic Studies cannot minor in Latin American Studies, but they may double major. Students double majoring in Hispanic Studies and Latin American Studies must have a third field of study (another major or minor).

Note: Students pursuing both the Hispanic Studies BA and the Teaching Spanish BAA must satisfactorily complete 12 non-overlapping upper division credits of Spanish electives over and above the requirements for the BAA to receive both degrees.

2) Two elective courses applicable to the major must be taken through UMD.

3) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

4) Oral proficiency exam.

Core (0-20 cr)
The core program in language skills (listening, speaking, reading, writing) is common to all majors and minors. Native and heritage speakers, as well as students with previous language study may be exempt from some core requirements and should consult the department about placement. Students need to complete the Advanced Spanish language course (SPAN 2301) before other upper division content courses that emphasize literature and culture.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAN 1101</td>
<td>Beginning Spanish I [LE CAT3, COMM &amp; LAN]</td>
<td>4.0 cr</td>
<td></td>
</tr>
<tr>
<td>SPAN 1102</td>
<td>Beginning Spanish II [LE CAT3, COMM &amp; LAN]</td>
<td>4.0 cr</td>
<td></td>
</tr>
<tr>
<td>SPAN 1201</td>
<td>Intermediate Spanish I [LE CAT3, COMM &amp; LAN]</td>
<td>4.0 cr</td>
<td></td>
</tr>
<tr>
<td>SPAN 1202</td>
<td>Intermediate Spanish II [LE CAT3, LEIP CAT03, COMM &amp; LAN]</td>
<td>4.0 cr</td>
<td></td>
</tr>
<tr>
<td>SPAN 2301</td>
<td>Advanced Spanish [LE CAT3, LEIP CAT03, COMM &amp; LAN]</td>
<td>4.0 cr</td>
<td></td>
</tr>
</tbody>
</table>

Upper Division Electives (23-24 cr)
Take at least 5 courses for a minimum of 23-24 credits. Most SPAN 3xxx level or above courses apply here. To enroll in these courses students must have earned a C or better in SPAN 2301, be currently enrolled, or have instructor consent. With adviser consent, some upper-division Spanish courses may be transferred and/or earned abroad, but at least two courses must be taken through UMD.

Take 23 or more credit(s) from the following:

- **SPAN 3020** - Advanced Spanish for Business (4.0 cr)
- **SPAN 3042** - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
- **SPAN 3044** - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
- **SPAN 3097** - Internship (1.0 - 6.0 cr)
- **SPAN 3894** - Language and Culture in Spain - Study Abroad [GLOBAL PER] (6.0 cr)
- **SPAN 4011** - Latin American Prose [HUMANITIES] (4.0 cr)
- **SPAN 4013** - Hispanic American Poetry and Drama [HUMANITIES] (4.0 cr)
- **SPAN 4017** - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
- **SPAN 4018** - Latin America From Within [HUMANITIES] (4.0 cr)
- **SPAN 4019** - Seminar: Latin America in the 21st Century [HUMANITIES] (4.0 cr)
- **SPAN 4022** - Medieval and Golden Age Literature and Culture of Spain [HUMANITIES] (4.0 cr)
- **SPAN 4027** - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
- **SPAN 4028** - Literature and Culture of Spain 18th to the 20th Century [HUMANITIES] (4.0 cr)
- **SPAN 4030** - Cinema and Culture of Spain [FINE ARTS] (4.0 cr)
- **SPAN 4090** - Aspects of the Hispanic World [HUMANITIES] (4.0 cr)
- **SPAN 4091** - Independent Study (1.0 - 4.0 cr)
- **SPAN 4095** - Special Topics: (Various Titles to be Assigned) (4.0 cr)

Optional Elective
One of the following courses (taught in English) applies to the "Upper Division 23-24 Electives." However, students majoring in Hispanic Studies may take both Latin American courses taught in English (SPAN 2540 & SPAN 2550) by exception. With prior approval from an advisor, selected courses may be taken in another department or program if related to the major.

Take 0 - 1 course(s) from the following:

- **ANTH 3632** - Latin American Cultures (3.0 cr)
- **ARTH 3110** - Art of the Ancient Americas (3.0 cr)
- **ARTH 3130** - Modern and Contemporary Mexican Art (3.0 cr)
- **ARTH 3140** - Women in Art/Visual Culture in Latin America (3.0 cr)
- **GEOG 3712** - Geography of Latin America (3.0 cr)
- **LING 1811** - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
- **LING 3101** - Introduction to Phonology (3.0 cr)
- **PHIL 2011** - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
- **PHIL 3025** - Philosophy of Race and Racism (4.0 cr)
- **POL 3575** - Latin American Politics and Development (4.0 cr)
- **POL 3580** - Central American Politics (4.0 cr)
- **WS 3001** - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)

OR take one or both of the following courses:
(Students majoring in Hispanic Studies may apply both courses towards the 'Upper Division 23-24 Electives' by exception.)
• SPAN 2540 - Latino Literatures and Cultures [LE CAT8, LEC0 CAT08, HUMANITIES, CDIVERSITY] (4.0 cr)
or SPAN 2550 - Globalization and Sustainability in Latin America [SUSTAIN] (4.0 cr)

Advanced Writing Requirement (3 cr)
Recommended: WRIT 3100 - Advanced Writing: Language and Literature
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus
Hispanic Studies Minor
World Languages & Cultures
College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12 to 32
- Study abroad will be strongly encouraged, to be determined by student interest and focus, throughout the Spanish-speaking world.

The Hispanic studies minor complements any liberal arts degree and many professional degrees, especially those in business, medicine, teaching and public service.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Core (0-20 cr)
Students may be exempt from part or all of the core requirements if they are native or heritage speakers of Spanish, or have previously completed studies in Spanish at the high school or college level.

- SPAN 1101 - Beginning Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
- SPAN 1102 - Beginning Spanish II [LE CAT3, COMM & LAN] (4.0 cr)
- SPAN 1201 - Intermediate Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
- SPAN 1202 - Intermediate Spanish II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
- SPAN 2301 - Advanced Spanish [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Upper Division (12 cr)
Take at least 3 courses for a minimum of 12 credits. Most SPAN 3xx-4xxx courses apply here. A grade of C or better in SPAN 2301 is required for upper division coursework. With advisor consent, elective courses taken abroad count toward the minor. SPAN 4091-Independent Study, does not apply to the minor.

Take 12 or more credit(s) from the following:
- SPAN 3020 - Advanced Spanish for Business (4.0 cr)
- SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
- SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
- SPAN 3097 - Internship (1.0 - 6.0 cr)
- SPAN 3894 - Language and Culture in Spain - Study Abroad [GLOBAL PER] (6.0 cr)
- SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
- SPAN 4013 - Hispanic American Poetry and Drama [HUMANITIES] (4.0 cr)
- SPAN 4017 - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
- SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
- SPAN 4019 - Seminar: Latin America in the 21st Century [HUMANITIES] (4.0 cr)
- SPAN 4022 - Medieval and Golden Age Literature and Culture of Spain [HUMANITIES] (4.0 cr)
- SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
- SPAN 4028 - Literature and Culture of Spain 18th to the 20th Century [HUMANITIES] (4.0 cr)
- SPAN 4030 - Cinema and Culture of Spain [FINE ARTS] (4.0 cr)
- SPAN 4090 - Aspects of the Hispanic World [HUMANITIES] (4.0 cr)
- SPAN 4095 - Special Topics: (Various Titles to be Assigned) (4.0 cr)

- one of the following may apply (taught in English):
  - SPAN 2540 - Latino Literatures and Cultures [LE CAT8, LECD CAT08, HUMANITIES, CDIVERSITY] (4.0 cr)
  - or SPAN 2550 - Globalization and Sustainability in Latin America [SUSTAIN] (4.0 cr)
**Duluth Campus**

**History B.A.**

**History College of Liberal Arts**

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 35
- Degree: Bachelor of Arts

The study of history is vital to a liberal arts education, because it provides a holistic approach to knowledge; it broadens students’ understanding of commonality and diversity, development of cultures, and drama of human experience.

History touches on the whole range of the human heritage. While focusing on the past, it also helps students understand the present and provides a strong foundation for the future. It prepares students for careers that demand analytical and communication skills, critical thinking, and cultural breadth. These careers include law, business, journalism, teaching, government, and the ministry.

This program introduces students to major world cultures and provides experience in the critical use of historical literature and other source materials. It offers courses in five geographical areas (Africa, East Asia, Europe, Middle East, and The Americas).

Honors requirements: Candidates must have a 3.00 overall GPA and a 3.30 in the major. An honors paper or project must be completed in a 5xxx course. Students who wish to have such work considered for honors must complete a departmental form the first semester of their senior year. Completed projects and papers must be approved by the sponsoring faculty member and one other member of the faculty. Also, students must complete the sequence in the intermediate-level courses of one second or foreign language. Students may be exempt from this requirement if they have previously completed an equivalent language at this level. The History Department Head reviews exemptions. Students should consult the Departments of American Indian Studies (Ojibwe), Education (American Sign Language), or World Language and Cultures (Chinese, French, German, Spanish or other) about placement.

**Program Delivery**

This program is available:
- via classroom (the majority of instruction is face-to-face)

**Admission Requirements**

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

**Required prerequisites**

**Introductory Requirement (1 cr)**

Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement.

New first-year students with 24 or more PSEO credits may request to be waived from this requirement.

**UST 1000 - UMD Seminar (1.0 - 2.0 cr)**

**General Requirements**

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the [Liberal Education Program](#).
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

## Program Requirements

1. A second field of study (either a minor or another major).
2. Students are strongly encouraged to study abroad and/or study a second language.
3. Students are encouraged, in consultation with the department's internship advisor, to participate in an internship, a learning experience either on or off campus that introduces them to practical applications or other methodological issues of history as a discipline. See HIST 3097-Internship in History (1-3 cr).

### Program Core Requirements (30 cr)

Take courses from the following geographical areas (all five different geographical areas must be represented).

- No more than 12 credits at the 1xxx-2xxx may be applicable.
- Within the program core, 18 credits in HIST 3xxx-4xxx are required.

Students may elect to satisfy this requirement by taking all courses at the 3xxx level or above.

#### Africa

- **AAAS 1102 - Introduction to Atlantic Slave Trade [LE CAT7, LECD CAT07, CDIVERSITY]** (3.0 cr)
- **HIST 2515 - Ancient to Pre-Modern African History [LE CAT7, LECD CAT07, HUMANITIES]** (4.0 cr)
- **HIST 3615 - Modern Africa (4.0 cr)**
- **HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)**
- **HIST 3695 - Special Topics African History (various titles to be assigned) (4.0 cr)**

#### East Asia

- **HIST 1400 - Modern World History from 1500 to present [LE CAT7, LEIP CAT07, HUMANITIES, GLOBAL PER]** (4.0 cr)
- **HIST 2405 - History of Chinese Culture (4.0 cr)**
- **HIST 2410 - Modern China, Japan, Korea, Vietnam and East Asia (4.0 cr)**
- **HIST 3463 - History of Modern China (4.0 cr)**
- **HIST 3465 - Twentieth Century China Politics (4.0 cr)**
- **HIST 3495 - Special Topics East Asian History (Various Titles to be Assigned) (4.0 cr)**

#### Europe

- **HIST 1200 - World History to 1500: From Antiquity to the Age of Exploration [HUMANITIES, GLOBAL PER]** (4.0 cr)
- **HIST 1207 - Dawn of Modern Europe [LE CAT7, HUMANITIES]** (4.0 cr)
- **HIST 1208 - Europe in the Modern Age [LE CAT7, HUMANITIES]** (4.0 cr)
- **HIST 2345 - Science and Society: 1500 to Present [LE CAT7, HUMANITIES]** (4.0 cr)
- **HIST 3133 - Ancient Greece from Homer to Alexander (4.0 cr)**
- **HIST 3141 - Ancient Rome: From Republic to Empire (4.0 cr)**
- **HIST 3195 - Special Topics European History (various titles to be assigned) (4.0 cr)**
- **HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)**
- **HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)**
- **HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)**
- **HIST 3265 - The Soviet Experiment: Russia, the USSR, and Contemporary Russia [LE CAT7, LEIP CAT07, GLOBAL PER]** (4.0 cr)
- **HIST 3939 - Europe in the Age of Renaissance and Reformation: 1348-1648 (4.0 cr)**
- **HIST 3940 - Early Modern England: 1485-1689 (4.0 cr)**

#### Middle East

- **HIST 1027 - Introduction to Islam [LE CAT7, LEIP CAT07, HUMANITIES]** (4.0 cr)
- **HIST 2325 - Muslim Societies [LE CAT7, LEIP CAT07]** (4.0 cr)
- **HIST 3035 - Ancient Warfare From Alexander to Mohammad (4.0 cr)**
- **HIST 3038 - History of Christianity: Origins to 1054 (4.0 cr)**
- **HIST 3055 - The Bible & Ancient Near East (4.0 cr)**
- **HIST 3720 - Iran: History, Politics, and Culture (4.0 cr)**
- **HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)**
- **HIST 3795 - Special Topics Middle Eastern History (various titles to be assigned) (4.0 cr)**
- **HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)**
- **HIST 4727 - Middle Eastern History Through Film [LEIP CAT07]** (4.0 cr)

#### The Americas

- **HIST 1304 - US History Part I: 1607-1877 [LE CAT7, HUMANITIES]** (4.0 cr)
- **HIST 1305 - US History Part II: 1865-Present [LE CAT7, HUMANITIES]** (4.0 cr)
- **HIST 1310 - Minnesota History (4.0 cr)**
• HIST 2315 - Colonial Latin America (4.0 cr)
• HIST 2350 - Nutrition and American History [HUMANITIES, SUSTAIN] (4.0 cr)
• HIST 3310 - Colonial America: The American Revolution (4.0 cr)
• HIST 3313 - Global Surf Culture - Study Abroad [GLOBAL PER] (4.0 cr)
• HIST 3315 - Religion in Colonial America (4.0 cr)
• HIST 3318 - Slavery, Lincoln and the Civil War (4.0 cr)
• HIST 3320 - American Popular Culture, 1929 to the Present (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3395 - Special Topics The Americas (various titles to be assigned) (4.0 cr)
• HIST 3396 - The Vietnam War (4.0 cr)

Optional Electives
Take 0 or more course(s) from the following:
• HIST 2095 - Special Topics in History (Various Titles to be Assigned) (1.0 - 4.0 cr)
• HIST 3091 - Directed Readings in History (1.0 - 4.0 cr)
• HIST 3095 - Special Topics: (Various Titles to be Assigned) (3.0 cr)
• HIST 3097 - Internship in History (1.0 - 3.0 cr)
• HIST 3099 - Practicum in Teaching History (3.0 cr)
• HIST 3525 - Introduction to Historic Preservation (4.0 cr)
• HIST 3535 - Material Culture: from Object to History (4.0 cr)

Upper Division Core Requirement (4 cr)
Additional HIST 5905 may be applied to a program core area with department head approval.
HIST 5905 - History Seminar (4.0 cr)
Duluth Campus
History Minor
History
College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 16

The history minor offers students an introduction to historical literature and methods while concentrating on three of five geographical fields within the history discipline: Africa, East Asia, Europe, Middle East, and the Americas.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Program Core Requirements (16 cr)
Take 16 or more credits from the following geographical areas (at least two different geographical areas must be represented). No more than two 1xxx level courses may be applicable. Students may elect to satisfy this requirement by taking all courses at the HIST 3xxx level or above from the lists below.
Take 16 or more credit(s) from the following:

Africa
Take 0 or more course(s) from the following:
- AAAS 1102 - Introduction to Atlantic Slave Trade [LE CAT7, LECD CAT07, CDIVERSITY] (3.0 cr)
- HIST 2515 - Ancient to Pre-Modern African History [LE CAT7, LECD CAT07, HUMANITIES] (4.0 cr)
- HIST 3615 - Modern Africa (4.0 cr)
- HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
- HIST 3695 - Special Topics African History (various titles to be assigned) (4.0 cr)

East Asia
Take 0 or more course(s) from the following:
- HIST 1400 - Modern World History from 1500 to present [LE CAT7, LEIP CAT07, HUMANITIES, GLOBAL PER] (4.0 cr)
- HIST 2405 - History of Chinese Culture (4.0 cr)
- HIST 2410 - Modern China, Japan, Koreas, Vietnam and East Asia (4.0 cr)
- HIST 3463 - History of Modern China (4.0 cr)
- HIST 3465 - Twentieth Century China Politics (4.0 cr)
- HIST 3495 - Special Topics East Asian History (Various Titles to be Assigned) (4.0 cr)

Europe
Take 0 or more course(s) from the following:
- HIST 1200 - World History to 1500: From Antiquity to the Age of Exploration [HUMANITIES, GLOBAL PER] (4.0 cr)
- HIST 1207 - Dawn of Modern Europe [LE CAT7, HUMANITIES] (4.0 cr)
- HIST 1208 - Europe in the Modern Age [LE CAT7, HUMANITIES] (4.0 cr)
- HIST 2345 - Science and Society: 1500 to Present [LE CAT7, HUMANITIES] (4.0 cr)
- HIST 3133 - Ancient Greece from Homer to Alexander (4.0 cr)
- HIST 3141 - Ancient Rome: From Republic to Empire (4.0 cr)
- HIST 3195 - Special Topics European History (various titles to be assigned) (4.0 cr)
- HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
- HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
- HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
- HIST 3265 - The Soviet Experiment: Russia, the USSR, and Contemporary Russia [LE CAT7, LEIP CAT07, GLOBAL PER] (4.0 cr)
- HIST 3939 - Europe in the Age of Renaissance and Reformation: 1348-1648 (4.0 cr)
- HIST 3940 - Early Modern England: 1485-1689 (4.0 cr)

Middle East
Take 0 or more course(s) from the following:
- HIST 1027 - Introduction to Islam [LE CAT7, LEIP CAT07, HUMANITIES] (4.0 cr)
- HIST 2325 - Muslim Societies [LE CAT7, LEIP CAT07] (4.0 cr)
- HIST 3035 - Ancient Warfare from Alexander to Mohammad (4.0 cr)
- HIST 3038 - History of Christianity: Origins to 1054 (4.0 cr)
- HIST 3055 - The Bible & Ancient Near East (4.0 cr)

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Information current as of October 02, 2018
• HIST 3720 - Iran: History, Politics, and Culture (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• HIST 3795 - Special Topics Middle Eastern History (various titles to be assigned) (4.0 cr)
• HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
• HIST 4727 - Middle Eastern History Through Film [LEIP CAT07] (4.0 cr)

• The Americas
Take 0 or more course(s) from the following:
• HIST 1304 - US History Part I: 1607-1877 [LE CAT7, HUMANITIES] (4.0 cr)
• HIST 1305 - US History Part II: 1865-Present [LE CAT7, HUMANITIES] (4.0 cr)
• HIST 1310 - Minnesota History (4.0 cr)
• HIST 2315 - Colonial Latin America (4.0 cr)
• HIST 2350 - Nutrition and American History [HUMANITIES, SUSTAIN] (4.0 cr)
• HIST 3310 - Colonial America: The American Revolution (4.0 cr)
• HIST 3313 - Global Surf Culture - Study Abroad [GLOBAL PER] (4.0 cr)
• HIST 3315 - Religion in Colonial America (4.0 cr)
• HIST 3318 - Slavery, Lincoln and the Civil War (4.0 cr)
• HIST 3320 - American Popular Culture, 1929 to the Present (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3395 - Special Topics The Americas (various titles to be assigned) (4.0 cr)
• HIST 3396 - The Vietnam War (4.0 cr)

• Optional Electives
Take 0 or more course(s) from the following:
• HIST 2095 - Special Topics in History (Various Titles to be Assigned) (1.0 - 4.0 cr)
• HIST 3095 - Special Topics: (Various Titles to be Assigned) (3.0 cr)
• HIST 3525 - Introduction to Historic Preservation (4.0 cr)
• HIST 3535 - Material Culture: from Object to History (4.0 cr)
Duluth Campus
Interdisciplinary Studies B.A.
College of Liberal Arts - Adm
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 51 to 62
- Degree: Bachelor of Arts

The program is for students whose educational objectives can best be met by integrating courses across departments. This major is unique because it is individually designed; students work with 2-3 faculty advisors to create a framework that involves courses from several fields of study. It may encompass the natural sciences, social sciences, cultural studies, fine arts, technical and professional fields, or a combination of these.

This major offers two tracks: an Individualized Plan that allows students to choose the emphasis of their major, and a Medical Arts and Sciences Plan that prepares students for health-related careers. Both plans require students to choose the specific focus of their program and craft a curriculum to fit that focus.

Unlike many UMD majors, Interdisciplinary Studies is available only by formal application and approval by the student's faculty advisors and the Interdisciplinary Studies Program Director. Students cannot apply for a change of major until their program has been approved.

Proposals must incorporate at least three different areas of study, including at least 12 credits from within the College of Liberal Arts. Students are welcome to include courses from other UMD colleges.

Visit the IS site for further information: z.umn.edu/clais

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this
requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) Study abroad is encouraged for all students and CLA makes every effort to facilitate such experiences.
2) A cumulative U of MN GPA of at least 2.50 is required.
3) Within the proposal, at least three areas of study are included and 12 credits must be from CLA course offerings.
4) In consultation with 2-3 faculty advisors, students develop an application including:
   - A statement of their educational objectives
   - A chosen track (Individual Plan or Medical Arts and Sciences Plan)
   - Identified two methods courses (minimum 6 credits)
   - A list of proposed courses that will form the student's curriculum (minimum 36 credits).

In most cases, students must submit their proposal before completing 70 credits. Exceptions include returning students, transfer students admitted with 70 or more credits, and active military or veteran students, who may declare the major before completing 90 credits. These students are only eligible for the Individualized Plan track.

Foundations Course (4 cr)
IS 2001 - Sustainability Across Disciplines [SUSTAIN] (4.0 cr)

Methods Courses (6-8 cr)
All students are required to complete two research methods courses appropriate to their final project before they register for senior project. These courses are chosen in consultation with the student's faculty advisors and the program director.

Final Project (1-10 cr)
The senior project usually results in an academic paper of 15-30 pages. The project may be an internship, portfolio, exhibit, tour, or field study. The project includes a bibliography of library resources showing general knowledge of the topic and a written paper, report, journal, or analysis of how the program has affected one's personal and intellectual development. A copy of the project must be filed with the program director.
IS 3093 - Senior Project (1.0 - 10.0 cr)

Advanced Writing Requirement (3 cr)
WRIT 31xx - Adv Writing (3 cr)

Proposed Electives (36 cr)
Students must complete a minimum of 36 upper division credits (3xxx or above) across three or more areas of study; twelve credits must be from CLA course offerings.

Program Sub-plans
Students are required to complete one of the following sub-plans.

Individualized Plan
This track allows students to choose the emphasis of their major. This track may encompass the natural sciences, social sciences, cultural studies, fine arts, technical and professional fields, or a combination of these. The program admission application should be carefully crafted with advice from faculty advisors. Students should contact the program director for help identifying potential advisors.

Students must declare this track of the major before completing 70 credits. Exceptions include returning students, transfer students admitted with 70 or more credits, and active military or veteran students, who may declare this track of the major before completing 90 credits.

Visit the IS site for further information: z.umn.edu/clais
Medical Arts and Science Plan
This track is for students who plan to enter medical school or a health-related field after graduation but want to pursue coursework with a heavier liberal arts emphasis than the traditional ‘pre-med’ trajectory. Within the track, students can design a curriculum to suit their individual interests; examples might include holistic health, food politics, or midwifery. The Interdisciplinary Studies website provides a list of potential courses for students to consider as they work with faculty advisors to design a program of study.

Students must declare this track of the major before completing 70 credits.

Visit the IS site for further information: z.umn.edu/clais
Duluth Campus
International Studies B.A.
History, Political Science & International Studies
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 47 to 53
- Degree: Bachelor of Arts

This interdisciplinary program provides students with a broad background in contemporary international affairs and the skills necessary to participate effectively in the global community. The program incorporates courses and faculty from many different departments and programs. Majors and minors are encouraged to incorporate a study abroad experience into their programs.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement.
New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) Majors must be able either to demonstrate intermediate level verbal and writing skills in a second language or complete a second language through the intermediate-level sequence at the college level.

2) A second field of study (either a minor or another major).

3) Students are encouraged to study abroad. Course work taken abroad may be applicable to the major with approval from the INTS director.
Lower Division Core Requirement (13 cr)

ANTH 1604 - Cultural Anthropology [LE CAT6, LEIP CAT06, SOC SCI, GLOBAL PER] (4.0 cr)
GEOG 1205 - Our Globalizing World [SOC SCI, GLOBAL PER] (3.0 cr)
INTS 1010 - Introduction to International Studies [GLOBAL PER] (3.0 cr)
POL 1050 - International Relations [LE CAT8, LEIP CAT08, GLOBAL PER] (3.0 cr)

Upper Division Core Requirement (4 cr)

INTS 4100 - Seminar in International Studies (4.0 cr)

International Language Requirement (8 cr)

Majors must be able either to demonstrate intermediate level verbal and writing skills in a second language or complete a second language through the intermediate-level sequence at the college level. Students may be exempted from all or part of this requirement if they have previously studied in a second language. Students should consult the Department of World Language and Cultures for placement or potential waivers.

Chinese

CHIN 1201 - Intermediate Chinese I: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
CHIN 1202 - Intermediate Chinese II: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

or French

FR 1201 - Intermediate French I [LE CAT3, COMM & LAN] (4.0 cr)
FR 1202 - Intermediate French II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

or German

GER 1201 - Intermediate German I [LE CAT3, COMM & LAN] (4.0 cr)
GER 1202 - Intermediate German II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

or Russian

Intermediate Russian Language sequence at The College of St. Scholastica (through inter-institutional cross-registration) (8.0 cr). RUSS course(s) (through The College of St. Scholastica)

or Spanish

SPAN 1201 - Intermediate Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
SPAN 1202 - Intermediate Spanish II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Thematic Electives (9-12 cr)

Thematic courses are broadly focused on contemporary global issues, such as health, poverty, the environment, or security, as international problems rather than state specific issues.

To complete this requirement students take at least 3 courses from at least 2 different subjects, such as AMIN, POL, or WS. Students may apply study abroad, including short-term programs, other appropriate courses, or INTS courses for approval by the INTS director.

Take 3 or more course(s) from the following:

• AMIN 3430 - Global Indigenous Studies [GLOBAL PER] (3.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• ANTH 3888 - Anthropology of Food [SUSTAIN] (3.0 cr)
• ANTH 4623 - Anthropology and Contemporary Human Problems (3.0 cr)
• ANTH 4640 - Medical Anthropology (4.0 cr)
• ARTH 2380 - A Global History of Contemporary Art (3.0 cr)
• COMM 3535 - Intercultural Communication [LE CAT6, LEIP CAT06, CDIVERSITY] (4.0 cr)
• COMM 3625 - Rhetoric of Globalization [GLOBAL PER] (3.0 cr)
• COMM 4210 - Theories of Intercultural Communication (3.0 cr)
• ECON 3150 - Development Economics (3.0 cr)
• GEOG 3370 - Geographies of Development (3.0 cr)
• GEOG 3422 - Natural Hazards (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• LGBT 3151 - Queer Cinema in International Perspective [GLOBAL PER] (3.0 cr)
• LGBT 3152 - History of the International Homosexual Rights Movement (1895 - present) [GLOBAL PER] (3.0 cr)
• POL 3400 - Contemporary Issues in World Politics (4.0 cr)
• POL 3403 - American Foreign Policy (3.0 cr)
• POL 3420 - International Organization and Global Governance (3.0 cr)
• POL 3426 - Politics of International Law (4.0 cr)
• POL 3430 - Global Health Politics (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3456 - International Security: War and More (4.0 cr)
• POL 3530 - Comparative Constitutional Law and Judicial Politics (3.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• POL 3575 - Latin American Politics and Development (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3250 - Women, Peace and War [GLOBAL PER] (3.0 cr)

Regional Electives (9-12 cr)
Regional courses are courses that might, for example, focus on the politics, culture, or art of a particular country or region.

To complete this requirement students take at least 3 courses from at least 2 different subjects, such as ANTH, HIST, or SPAN. Students may apply study abroad, including short-term programs, other appropriate courses, or INTS courses for approval by the INTS director.

Take 3 or more course(s) from the following:
• AMIN 3230 - American Indian Tribal Government and Law [SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 4250 - American Indian Diplomacy: Treaties, Compacts, and Agreements [GLOBAL PER] (3.0 cr)
• ANTH 3632 - Latin American Cultures (3.0 cr)
• ANTH 3635 - Peoples and Cultures of Europe (3.0 cr)
• ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
• ARTH 3130 - Modern and Contemporary Mexican Art (3.0 cr)
• ARTH 3140 - Women in Art/Visual Culture in Latin America (3.0 cr)
• ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
• FR 2315 - French Cinema [LE CAT9, LEIP CAT09, HUMANITIES] (4.0 cr)
• FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
• GEOG 3712 - Geography of Latin America (3.0 cr)
• GER 2402 - Germany Today [LE CAT8, LEIP CAT08, HUMANITIES] (3.0 cr)
• GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
• GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
• GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
• HIST 2325 - Muslim Societies [LE CAT7, LEIP CAT07] (4.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
• HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
• HIST 3265 - The Soviet Experiment: Russia, the USSR, and Contemporary Russia [LE CAT7, LEIP CAT07, GLOBAL PER] (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3518 - Transitional Politics of Asia (3.0 cr)
• POL 3525 - African Politics (3.0 cr)
• POL 3575 - Latin American Politics and Development (4.0 cr)
• POL 3580 - Central American Politics (4.0 cr)
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4017 - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4019 - Seminar: Latin America in the 21st Century [HUMANITIES] (4.0 cr)
• SPAN 4022 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• SPAN 4028 - Literature and Culture of Spain 18th to the 20th Century [HUMANITIES] (4.0 cr)
• SPAN 4030 - Cinema and Culture of Spain [FINE ARTS] (4.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3750 - Voices of African Women [GLOBAL PER] (3.0 cr)

Advanced Writing Requirement (3 cr)
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus

International Studies Minor

History, Political Science & International Studies

College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 25

The international studies minor increases students' familiarity with their global surroundings and their understanding of important global issues and concerns. It provides them with an awareness of various aspects of international relations and an appreciation of the challenges and opportunities confronting specific world regions.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Foreign language study is strongly recommended.

A study abroad experience is encouraged.

Lower Division Core Requirements (13 cr)

- ANTH 1604 - Cultural Anthropology [LE CAT6, LEIP CAT06, SOC SCI, GLOBAL PER] (4.0 cr)
- GEOG 1205 - Our Globalizing World [SOC SCI, GLOBAL PER] (3.0 cr)
- INTS 1010 - Introduction to International Studies [GLOBAL PER] (3.0 cr)
- POL 1050 - International Relations [LE CAT8, LEIP CAT08, GLOBAL PER] (3.0 cr)

Upper Division Electives (12 cr)

Students take at least 3 courses from at least 2 different subjects, such as GER, POL, or WS. The approved list of courses is available within the INTS major Thematic and Regional Electives areas. Students propose 12 credits at or above the 2xxx level. Students may apply study abroad, including short-term programs, other appropriate courses, or INTS courses with approval from the INTS director. Other courses must be approved by the INTS director prior to the completion of the courses.

(At least one proposed course of at least 3 credits must be at the 3xxx level or higher.)
Duluth Campus
Journalism B.A.
Communication
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 41
- Degree: Bachelor of Arts

In an ever-changing media environment, the journalism major is designed to be innovative and dynamic, while adhering to a critical understanding of media's role in a diverse, global society. The major emphasizes community engagement and global competence. Our program gives students a toolbox of skills and a critical study of mass media. The BA in journalism starts with courses in journalism and communication that provide a core set of skills and a critical exploration of journalism. It then requires students to create a program of study that offers flexibility in how they apply journalism. These skills are further honed through application in a professional media setting. This degree requires students to choose either a minor or a second major that will further complement a student's journalistic expertise.

Students take courses from four categories:
- Craft: courses in journalism and communication that develop skills in the practice of journalism.
- Critical Inquiry: courses in journalism and communication that offer critical and theoretical study of journalism and mass media.
- Application: courses where students apply their skills in a real-world situation through a practicum class, an internship, or working at campus media (e.g. The Bark, KUMD). This is the capstone experience.
- Electives: courses that allow students to specialize their journalism studies based on their skills, interests and long-term goals. These courses come primarily from JOUR and COMM, but they can also be interdisciplinary, including choices such as cultural entrepreneurship, writing studies, English, and art.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A second field of study (either a minor or another major) is required.
2) Study abroad is encouraged for all students and the department makes every effort to support such experiences.

Core (25 cr)
The following craft and critical inquiry courses are required for all students in the major. Students are also required to take an application course.

Craft Core (13 cr)
- JOUR 2001 - Introduction to Journalism (3.0 cr)
- JOUR 2101 - Journalist's Toolbox (3.0 cr)
- JOUR 3401 - Digital Storytelling (4.0 cr)

Take one of the following courses:
- COMM 3505 - Media Communications (3.0 cr)
- JOUR 3001 - Local Journalism (3.0 cr)
- JOUR 4001 - Specialized Reporting: Narrative Nonfiction (3.0 cr)
- JOUR 4021 - Outdoor and Environmental Journalism (3.0 cr)

Critical Inquiry Core (9 cr)
- JOUR 2501 - History of American Media (3.0 cr)
- JOUR 3700 - Media Law and Ethics (3.0 cr)

Take one of the following courses:
- COMM 2101 - Foundations of Mass Communication [LE CAT8, SOC SCI] (3.0 cr)
- JOUR 2400 - Community and Journalism [GLOBAL PER] (3.0 cr)

Application Core (3 cr)
- JOUR 4102 - Newsroom Practicum (3.0 cr)
- JOUR 4197 - Journalism Internship (1.0 - 3.0 cr)

Electives (12 credits)
Courses that allow students to specialize their journalism studies based on their skills, interests and long-term goals. At least one course must come from JOUR. Remaining courses may come primarily from JOUR and COMM, but they can be interdisciplinary.

Journalism electives
Take 1 or more course(s) from the following:
- JOUR 2xxx
- JOUR 3xxx
- JOUR 4xxx

Complementary electives
Students are encouraged to look campus-wide for complementary courses. Choices such as cultural entrepreneurship (CUE), writing studies (WRIT), English (ENGL), and art (ART) or other relevant coursework, may apply with departmental approval. Students are encouraged to meet with their advisor about their elective choices.

Take 0 or more course(s) from the following:
- ART 1605 - Fundamentals of Photography [LE CAT10, FINE ARTS] (3.0 cr)
- ART 2040 - Digital Filmmaking: Visual Narratives (3.0 cr)
- COMM 2101 - Foundations of Mass Communication [LE CAT8, SOC SCI] (3.0 cr)
- COMM 3211 - Communication and Technology in the Information Age (3.0 cr)
- COMM 3405 - Health Campaigns (3.0 cr)
- COMM 3505 - Media Communications (3.0 cr)
- COMM 3520 - Media Effects [SOC SCI] (3.0 cr)
- COMM 3525 - Deciding What's News (3.0 cr)
- COMM 3550 - Children and Media (3.0 cr)
- COMM 3615 - Analysis of Public Discourse (3.0 cr)
- COMM 4505 - Media Theory and Research (3.0 cr)
- WRIT 1506 - Literacy, Technology and Society [LE CAT7, HUMANITIES] (3.0 cr)
- WRIT 4100 - Introduction to Grant Writing and Project Planning (3.0 cr)
- WRIT 4250 - New Media Writing (3.0 cr)

Advanced Writing (3 cr)
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus
Journalism Minor
Communication
College of Liberal Arts

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 21

In an ever-changing media environment, this minor exposes students to a toolbox of skills and a critical study of mass media. Students are allowed to choose electives in the program that will further complement their area of study.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Core Courses (12 cr)
- JOUR 2001 - Introduction to Journalism (3.0 cr)
- JOUR 2101 - Journalist's Toolbox (3.0 cr)
- JOUR 3001 - Local Journalism (3.0 cr)
- JOUR 3700 - Media Law and Ethics (3.0 cr)

Electives (9 cr)
Take at least three different JOUR course(s) totaling nine credits from the following: JOUR 1xxx - 5xxx
JOUR 1xxx-5xxx
Duluth Campus
Latin American Studies B.A.
World Languages & Cultures
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 32 to 51
- This program requires summer terms.
- Degree: Bachelor of Arts

Latin American Studies is the newer of the two Spanish programs offered at UMD. Students who major or minor in this program take courses in Spanish language through the advanced level before taking an interdisciplinary set of courses to intensify their study of Latin America. Our students apply their linguistic and interdisciplinary skills to a wide variety of local, regional, national, or international career choices. Latin American Studies majors do this by participating in either a study abroad experience or internship. Students gain experience through fieldwork with a Spanish-speaking community abroad or in Minnesota.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A study abroad experience or internship in Latin America or in a Latino community in the United States is required.
2) A second field of study (either a minor or another major).
3) Students majoring in Latin American Studies cannot minor in Hispanic Studies, but may double major.

4) Students double majoring in Latin American Studies and Hispanic Studies must have a third field of study (another major or minor).

**Required Language Core (0-16 cr)**

Students with previous language study, including those who are native or heritage speakers, may be exempt from some core language requirements and should consult the Latin American Studies advisor within the department about placement.

SPAN 1101 - Beginning Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
SPAN 1102 - Beginning Spanish II [LE CAT3, COMM & LAN] (4.0 cr)
SPAN 1201 - Intermediate Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
SPAN 1202 - Intermediate Spanish II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

**Required Core (12 cr)**

SPAN 2301 - Advanced Spanish [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
SPAN 2550 - Globalization and Sustainability in Latin America [SUSTAIN] (4.0 cr)
SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)

**Required Experience (3-6 cr)**

A study abroad experience or internship (at least 3 credits) in Latin America or in a Latino community in the United States is required. Many UMD short-term study abroad programs are typically offered during the summer. Students may select from the list below or consult with a Latin American Studies advisor for other options.

**Short-term Study Abroad Programs at UMD**

HIST 3313 - Global Surf Culture - Study Abroad [GLOBAL PER] (4.0 cr)
or INTB 4231 - Peru's Food Movement: The Links to Health, Development and Branding (3.0 cr)
or one of the following:
BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
or GEOL 4839 - Coral Reef Geology [GLOBAL PER] (3.0 cr)
or Internship
SPAN 3097 - Internship (1.0 - 6.0 cr)

**Required Electives (13 cr)**

Other courses that pertain to Latin America may be approved by a Latin American Studies advisor.

Take 13 or more credit(s) from the following:

• AMIN 3430 - Global Indigenous Studies [GLOBAL PER] (3.0 cr)
• ANTH 3632 - Latin American Cultures (3.0 cr)
• ARTH 3110 - Art of the Ancient Americas (3.0 cr)
• ARTH 3130 - Modern and Contemporary Mexican Art (3.0 cr)
• ARTH 3140 - Women in Art/Visual Culture in Latin America (3.0 cr)
• GEOG 3712 - Geography of Latin America (3.0 cr)
• LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
• LING 3101 - Introduction to Phonology (3.0 cr)
• PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
• PHIL 3025 - Philosophy of Race and Racism (4.0 cr)
• POL 3575 - Latin American Politics and Development (4.0 cr)
• POL 3580 - Central American Politics (4.0 cr)
• SPAN 2540 - Latino Literatures and Cultures [LE CAT8, LECD CAT08, HUMANITIES, CDIVERSITY] (4.0 cr)
• SPAN 3020 - Advanced Spanish for Business (4.0 cr)
• SPAN 3097 - Internship (1.0 - 6.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4013 - Hispanic American Poetry and Drama [HUMANITIES] (4.0 cr)
• SPAN 4017 - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4019 - Seminar: Latin America in the 21st Century [HUMANITIES] (4.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)

**Advanced Writing Requirement (3 cr)**

Recommended: WRIT 3100 - Advanced Writing: Language and Literature
WRIT 31xx - Adv Writing (3 cr)
Latin American Studies Minor

World Languages & Cultures
College of Liberal Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 18 to 34

Latin American Studies is the newer of the two Spanish programs offered at UMD. Students who major or minor in this program take courses in Spanish language through the advanced level before taking an interdisciplinary set of courses to intensify their study of Latin America. Our students apply their linguistic and interdisciplinary skills to a wide variety of local, regional, national, or international career choices.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Required Language Core (0 - 16 cr)
Students with previous language study may be exempt from some core requirements and should consult the department about placement.

- SPAN 1101 - Beginning Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
- SPAN 1102 - Beginning Spanish II [LE CAT3, COMM & LAN] (4.0 cr)
- SPAN 1201 - Intermediate Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
- SPAN 1202 - Intermediate Spanish II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Required Core (12 cr)
- SPAN 2301 - Advanced Spanish [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
- SPAN 2550 - Globalization and Sustainability in Latin America [SUSTAIN] (4.0 cr)
- SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)

Electives (6 cr)
Other UMD courses that pertain to Latin America may be approved by a Latin America Studies advisor within the department. Short-term study abroad programs are usually offered during the summer.
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
- AMIN 3430 - Global Indigenous Studies [GLOBAL PER] (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ARTH 3110 - Art of the Ancient Americas (3.0 cr)
- ARTH 3130 - Modern and Contemporary Mexican Art (3.0 cr)
- ARTH 3140 - Women in Art/Visual Culture in Latin America (3.0 cr)
- GEOG 3712 - Geography of Latin America (3.0 cr)
- LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
- LING 3101 - Introduction to Phonology (3.0 cr)
- PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
- PHIL 3025 - Philosophy of Race and Racism (4.0 cr)
- POL 3575 - Latin American Politics and Development (4.0 cr)
- POL 3580 - Central American Politics (4.0 cr)
- SPAN 2540 - Latino Literatures and Cultures [LE CAT8, LECD CAT08, HUMANITIES, CDIVERSITY] (4.0 cr)
- SPAN 3020 - Advanced Spanish for Business (4.0 cr)
- SPAN 3097 - Internship (1.0 - 6.0 cr)
- SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
- SPAN 4013 - Hispanic American Poetry and Drama [HUMANITIES] (4.0 cr)
- SPAN 4017 - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
- SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
- SPAN 4019 - Seminar: Latin America in the 21st Century [HUMANITIES] (4.0 cr)
- WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)

Short-term Study Abroad Programs at UMD (optional)
Take 0 or more course(s) from the following:

• HIST 3313 - Global Surf Culture - Study Abroad [GLOBAL PER] (4.0 cr)
• INTB 4231 - Peru's Food Movement: The Links to Health, Development and Branding (3.0 cr)
• BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
  or GEOL 4839 - Coral Reef Geology [GLOBAL PER] (3.0 cr)
Duluth Campus
Lesbian, Gay, Bisexual, Transgender, and Queer Studies Minor
Women, Gender & Sexuality Studies
College of Liberal Arts

• Program Type: Undergraduate free-standing minor
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 16

This program investigates historical, social, cultural, and theoretical representations and constructions of lesbian, gay, bisexual, transgender, queer, and intersex life in the U.S. and around the globe. Operating from the intersections of race, class, economic status, age, ability, and nationality among other configurations of identity, this program situates questions of sexual and gender orientation as fundamental to humanistic study, and is not limited to those who claim an LGBTQ or intersex identity. This program's interdisciplinary approach connects fields in the humanities, social sciences, life sciences, and fine arts, and produces knowledge beneficial to all fields.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Required Core (10 cr)
LGBT 3000 - Queer Theory (3.0 cr)
WS 1000 - Introduction to Women's and Gender Studies [LE CAT7, LEC CAT07, CULT DIV, SOC SCI, CDIVERSITY] (3.0 cr)
WS 2001 - Introduction to Lesbian Gay Bisexual and Transgender Studies [LE CAT8, LEC CAT08, CDIVERSITY] (4.0 cr)

Electives (6 cr)
Any LGBT 31xx course will apply here.
Take 6 or more credit(s) from the following:
• LGBT 3151 - Queer Cinema in International Perspective [GLOBAL PER] (3.0 cr)
• LGBT 3152 - History of the International Homosexual Rights Movement (1895 - present) [GLOBAL PER] (3.0 cr)
• LGBT 3153 - Queer Media [CDIVERSITY] (3.0 cr)
Duluth Campus

Linguistics B.S.

English Linguistics and Writing Studies

College of Liberal Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 48 to 53
• Degree: Bachelor of Science

This degree prepares students to undertake the study of language in a rigorous, scientific manner. The major offers basic and advanced courses in the sound, structure, and meaning of language, and it teaches students the fundamental methods of scientific inquiry. The curriculum focuses on both the internal place of language in the human mind and brain, as well as the external role of language in communication and culture. Along the way, students will consider many topics in linguistics, such as syntactic structure of languages, semantic and pragmatic meaning, language acquisition, language disorders, language evolution, dialects and sociolinguistic variation, language and gender, computational linguistics, and many others. With topics such as these in mind, students will be trained to form research questions, gather data, and make arguments based upon their observations. They will also gain experience working with a wide range of languages and diverse cultures. The program will also require a background in science and mathematics consistent with a bachelor of science degree, which will allow students a straightforward double major in many of the established science majors at the University.

There is a diversity of employment opportunities for linguistics majors. The analytical skills and experience with language makes linguistic majors particularly appealing to computer and software companies, as writers and analysts of all types, in education, in projects such as speech recognition and machine translation, and as preparation for advanced study in all of the liberal arts, social sciences, and computer sciences disciplines. Finally, the United States Department of Homeland Security and federal law enforcement agencies routinely hire employees trained in linguistics.

Program Delivery

This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A second field of study (either a minor or another major).
2) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

Core Requirements (9 cr)
LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
LING 3102 - Syntax (3.0 cr)
LING 3103 - Semantics and Pragmatics (3.0 cr)

Mathematics Requirements (8 - 10 cr)
Take two courses from the following two options:
MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
or STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)

Natural Science Requirement (7 - 10 cr)
Take one of the following sequences.

Biology
BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
or Chemistry
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
CHEM 1155 - General Chemistry II (4.0 cr)
CHEM 1156 - General Chemistry Lab II (1.0 cr)
or Geography
GEOG 1414 - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
GEOG 3401 - Weather and Climate (3.0 cr)
or GEOG 3422 - Natural Hazards (3.0 cr)
or Geology
GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
GEOL 2311 - Mineralogy (4.0 cr)
or PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)
PHYS 2015 - General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)
or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
PHYS 2018 - Honors General Physics II (4.0 cr)

Technical/Math or Natural Sciences (6 cr)
Two additional courses from technical/math or natural sciences. Courses taken above cannot apply here. Courses may be from one area or across fields of study.

Take 6 or more credit(s) from the following:
• BIOL 2xxx-3xxx
• CHEM 2xxx-3xxx
• CS 1xxx-3xxx
• GEOL 2xxx-3xxx
• GIS 2xxx-3xxx
• MATH 3xxx-4xxx
• PHYS 3xxx-4xxx
• STAT 1xxx-5xxx

Linguistics and External Electives Total (15 cr)
Within these 15 credits, 9 credits must be from linguistics in addition to the core. Two courses from the ‘External Electives’ may apply towards this requirement.

Linguistics Electives
Most LING 2xxx-4xxx courses apply here.
Take 9 or more credit(s) from the following:
• LING 2101 - Phonetics and Phonology [NAT SCI] (3.0 cr)
• LING 2195 - Special Topics: (Various Titles to be Assigned) (3.0 cr)
• LING 2400 - Language of Advertising (3.0 cr)
•LING 2506 - Language and Writing (3.0 cr)
•LING 2600 - Language in Society [SOC SCI] (3.0 cr)
•LING 3101 - Introduction to Phonology (3.0 cr)
•LING 3201 - Language and Gender (3.0 cr)
•LING 3203 - Linguistics and Social Media (3.0 cr)
•LING 3591 - Independent Study in Linguistics (1.0 - 3.0 cr)
•LING 4103 - Morphology: Word Structures and Rules (3.0 cr)
•LING 4104 - Corpus Linguistics (3.0 cr)
•LING 4105 - Cognitive Linguistics (3.0 cr)
•LING 4195 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
•LING 4852 - Teaching Assistantship in Linguistics (1.0 - 3.0 cr)

•External Electives (optional)
Take no more than 2 course(s) from the following:
•AMIN 2103 - Intermediate Ojibwe I [LE CAT3, LEC3 CAT03, COMM & LAN] (3.0 cr)
•AMIN 2104 - Intermediate Ojibwe II [LE CAT3, LEC3 CAT03, COMM & LAN] (3.0 cr)
•ASL 3003 - Intermediate American Sign Language I [COMM & LAN] (3.0 cr)
•ASL 3004 - Intermediate American Sign Language II [COMM & LAN] (3.0 cr)
•CHIN 1201 - Intermediate Chinese I: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
•CHIN 1202 - Intermediate Chinese II: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
•CS 5541 - Artificial Intelligence (4.0 cr)
•CS 5751 - Introduction to Machine Learning and Data Mining (4.0 cr)
•CS 5761 - Introduction to Natural Language Processing (4.0 cr)
•ENGL 5821 - History of the English Language (4.0 cr)
•FR 1201 - Intermediate French I [LE CAT3, COMM & LAN] (4.0 cr)
•FR 1202 - Intermediate French II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
•GER 1201 - Intermediate German I [LE CAT3, COMM & LAN] (4.0 cr)
•GER 1202 - Intermediate German II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
•PHIL 1025 - Introduction to Cognitive Science [NAT SCI] (3.0 cr)
•PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
•PSY 3621 - Cognition (4.0 cr)
•PSY 3661 - Psychology of Language (3.0 cr)
•SPAN 1201 - Intermediate Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
•SPAN 1202 - Intermediate Spanish II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
•SPAN 2301 - Advanced Spanish [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

Advanced Writing Requirement (3 cr)
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus
Linguistics Minor
English Linguistics and Writing Studies
College of Liberal Arts

• Program Type: Undergraduate free-standing minor
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 20

This minor emphasizes two important facets of human language—the mathematical and social aspects of language. To understand the formal mathematical nature of human language, courses are offered in the areas of phonology, morphology, and syntax. The issues of language as social phenomena are dealt with in diverse, socio-cultural linguistics courses. After minoring in linguistics, students will achieve a high level of analytical ability, which is necessary not only in linguistics, but also in many other related fields, including computer science, mathematics, philosophy, and psychology.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Core Requirements (6 cr)
LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)
LING 3102 - Syntax (3.0 cr)

Electives (14 cr)
Most LING 2xxx-4xxx courses apply here.
Take 14 or more credit(s) from the following:
• ENGL 5821 - History of the English Language (4.0 cr)
• LING 2101 - Phonetics and Phonology [NAT SCI] (3.0 cr)
• LING 2195 - Special Topics: (Various Titles to be Assigned) (3.0 cr)
• LING 2400 - Language of Advertising (3.0 cr)
• LING 2506 - Language and Writing (3.0 cr)
• LING 2600 - Language in Society [SOC SCI] (3.0 cr)
• LING 3101 - Introduction to Phonology (3.0 cr)
• LING 3103 - Semantics and Pragmatics (3.0 cr)
• LING 3201 - Language and Gender (3.0 cr)
• LING 3203 - Linguistics and Social Media (3.0 cr)
• LING 3591 - Independent Study in Linguistics (1.0 - 3.0 cr)
• LING 4103 - Morphology: Word Structures and Rules (3.0 cr)
• LING 4104 - Corpus Linguistics (3.0 cr)
• LING 4105 - Cognitive Linguistics (3.0 cr)
• LING 4195 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
• LING 4852 - Teaching Assistantship in Linguistics (1.0 - 3.0 cr)
• PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
• PSY 3661 - Psychology of Language (3.0 cr)

Language (optional)
No more than one course from a single second language may apply towards the 'Electives (14 cr)' requirement: American Sign Language, Chinese, French, German, Ojibwe, Spanish.
Take 0 - 1 course(s) from the following:
• AMIN 1103 - Beginning Ojibwe I [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• AMIN 1104 - Beginning Ojibwe II [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• AMIN 2103 - Intermediate Ojibwe I [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• AMIN 2104 - Intermediate Ojibwe II [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• ASL 2001 - Beginning American Sign Language I [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• ASL 2002 - Beginning American Sign Language II [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
• ASL 3003 - Intermediate American Sign Language I [COMM & LAN] (3.0 cr)
• ASL 3004 - Intermediate American Sign Language II [COMM & LAN] (3.0 cr)
• CHIN 1101 - Beginning Chinese I: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
• CHIN 1102 - Beginning Chinese II: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
• CHIN 1201 - Intermediate Chinese I: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
• CHIN 1202 - Intermediate Chinese II: Mandarin Chinese [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
• FR 1101 - Beginning French I [LE CAT3, COMM & LAN] (4.0 cr)
• FR 1102 - Beginning French II [LE CAT3, COMM & LAN] (4.0 cr)
• FR 1201 - Intermediate French I [LE CAT3, COMM & LAN] (4.0 cr)
• FR 1202 - Intermediate French II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
• GER 1101 - Beginning German I [LE CAT3, COMM & LAN] (4.0 cr)
• GER 1102 - Beginning German II [LE CAT3, COMM & LAN] (4.0 cr)
• GER 1201 - Intermediate German I [LE CAT3, COMM & LAN] (4.0 cr)
• GER 1202 - Intermediate German II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
• SPAN 1101 - Beginning Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
• SPAN 1102 - Beginning Spanish II [LE CAT3, COMM & LAN] (4.0 cr)
• SPAN 1201 - Intermediate Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
• SPAN 1202 - Intermediate Spanish II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
• SPAN 2301 - Advanced Spanish [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
Duluth Campus
Museum Studies Certificate
History
College of Liberal Arts

- Program Type: Undergraduate credit certificate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 16
- Potential training sites to include several museums in Duluth, as well as Superior, WI, Virginia, Eveleth, Hibbing, Grand Rapids, Ely, Tower, the North Shore area, Pine City as well as institutions in Ireland and England are being developed as potential internship sites.

The museum studies certificate unites history, theory, and practical learning in a curriculum that prepares participants for professional or volunteer careers in administration, collections, and specialty disciplines within museums, archives, tribal collections, zoos, aquariums, parks, and botanical gardens.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Please see the following UMD site for details on how to apply for this certificate:
z.umn.edu/umdcert

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
Required Courses (12 cr)
Students must take HIST 3097 for a minimum of 3 credits.
ARTH 3150 - Contemporary Global Exhibition (3.0 cr)
HIST 3097 - Internship in History (1.0 - 3.0 cr)
MST 1100 - Introduction to Museums (3.0 cr)
MST 1200 - Introduction to Public History (3.0 cr)

Business Requirement (4 cr)
These courses are provided in an online format and can be taken in any order. See Class Search for variable start dates of courses (1st half, 2nd half or full-term).
Take 2 or more course(s) from the following:
• BUS 2100 - Fundamentals of Accounting (2.0 cr)
• BUS 2400 - Fundamentals of Organizational Management (2.0 cr)
• BUS 2700 - Fundamentals of Marketing (2.0 cr)
Duluth Campus
Philosophy B.A.

College of Liberal Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 31 to 38
• Degree: Bachelor of Arts

This program familiarizes students with the broad range of foundational theories that arose in the history of philosophy and helps students develop problem-solving skills using critical thinking. Beginning courses provide a comprehensive introduction to the methods and procedures of analytical reasoning by examining issues concerning logic, the nature of knowledge and reality, the existence of freedom, and the character of right and wrong. Advanced courses focus on special historical periods (e.g., Greek philosophy, early modern philosophy) and specific problem areas (e.g., philosophy of psychology, medical ethics, philosophy of language).

Principles that emerge from the study of philosophy concern basic theories and concepts, and the nature of reasoning as it applies to all areas of investigation within the humanities, natural sciences, and social sciences. As a result, studying philosophy enhances all majors and minors.

Honors requirements: Candidates must be philosophy majors with a 3.30 GPA in the major. Students complete PHIL 5991 and write a substantial paper or significantly rewrite a paper submitted for another philosophy course. Students must notify the department head of their intent to participate in the honors program by the end of the first week of the semester of graduation and the paper must be approved by a faculty member at least 30 days before the end of the term. The paper is presented orally in a department colloquium with the approved manuscript submitted to the department head at least one week before presentation. Contact the department head for more information.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement.
New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

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Information current as of October 02, 2018
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1) A second field of study (either a minor or another major).

2) Majors with sub-plans must be declared through the CLA Advising & Academic Services office.

3) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

4) PHIL 3900 - Colloquium for Majors. Students attend 12 department approved philosophy lectures/discussions over a 4-year period and register for PHIL 3900 only during the semester they attend their 12th lecture; contact the department for details.

Program Sub-plans

Students are required to complete one of the following sub-plans.

General

The General sub-plan emphasizes the history of philosophical thought and metaphysics and theory of knowledge.

Core (12 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 1001</td>
<td>Introduction to Philosophy</td>
<td>3.0</td>
</tr>
<tr>
<td>PHIL 1018</td>
<td>Logic [LE CAT2, LOGIC &amp; OR]</td>
<td>4.0</td>
</tr>
<tr>
<td>PHIL 3900</td>
<td>Colloquium for Majors</td>
<td>1.0</td>
</tr>
<tr>
<td>PHIL 4900</td>
<td>Seminar in Philosophy</td>
<td>4.0</td>
</tr>
</tbody>
</table>

History of Philosophy Electives (8 cr)

Students are required to take 3301 OR 3303, and at least one additional course from the list below. It is recommended that students take both 3301 and 3303, and either 3319 or 3320.

Take one of the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 3301</td>
<td>Greek Philosophy</td>
<td>4.0</td>
</tr>
<tr>
<td>PHIL 3303</td>
<td>The Birth of Modern Philosophy</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Take one additional Hist of Phil course:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHIL 3303</td>
<td>The Birth of Modern Philosophy</td>
<td>4.0</td>
</tr>
<tr>
<td>PHIL 3319</td>
<td>19th Century Philosophy</td>
<td>4.0</td>
</tr>
<tr>
<td>PHIL 3320</td>
<td>20th Century Philosophy</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Electives (7-8 cr)

Alternative courses taken within the History of Philosophy Electives may apply here. Most PHIL 1xxx-3xxx level courses apply here. (Three different elective courses listed may satisfy this requirement, but at least two of the courses must be at the 2xxx level or above. PHIL 5991 can contribute no more than a maximum of 3 credits towards this requirement. If a student is taking PHIL 5991 to meet Departmental Honors, those credits can also apply towards this elective requirement.)

Take 0 - 1 course(s) from the following:

- PHIL 1003 - Ethics and Society [LE CAT8, LEIP CAT08, HUMANITIES, CDIVERSITY] (3.0 cr)
- PHIL 1005 - Philosophy through Dialogue and Debate [COMM & LAN] (3.0 cr)
- PHIL 1007 - Philosophy and World Religions [LE CAT7, LEIP CAT07, HUMANITIES, GLOBAL PER] (3.0 cr)
- PHIL 1008 - Critical Thinking [LE CAT2, LOGIC & OR] (4.0 cr)
- PHIL 1021 - Classical Mythology [LE CAT9, HUMANITIES] (3.0 cr)
- PHIL 1025 - Introduction to Cognitive Science [NAT SCI] (3.0 cr)

• Required Upper Division Electives

Take 2 or more course(s) from the following:

- PHIL 2001 - Existential Philosophy and the Arts [HUMANITIES] (3.0 cr)
- PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
- PHIL 2021 - Science and Pseudo-Science: Thinking about Weird Things [LE CAT8, HUMANITIES] (3.0 cr)
- PHIL 3025 - Philosophy of Race and Racism (4.0 cr)
- PHIL 3195 - Special Topics: (Various Titles to be Assigned) (3.0 - 9.0 cr)
- PHIL 3222 - Medical Ethics (4.0 cr)
- PHIL 3231 - Law and Punishment (4.0 cr)
- PHIL 3242 - Values and Technology [LE CAT8, HUMANITIES] (3.0 cr)
- PHIL 3245 - Philosophy of Art (3.0 cr)
- PHIL 3252 - Philosophy of Science (3.0 cr)
- PHIL 3281 - Ethical Theory (4.0 cr)
- PHIL 3291 - Current Social Political Philosophy (4.0 cr)
• PHIL 3325 - Environmental Ethics [HUMANITIES, SUSTAIN] (4.0 cr)
• PHIL 3421 - Eastern Philosophy (4.0 cr)
• PHIL 3570 - Philosophy of Psychology (4.0 cr)
• PHIL 3655 - Theory of Knowledge (4.0 cr)
• PHIL 5991 - Independent Study (1.0 - 3.0 cr)
• PHIL 5997 - Intern Teaching Assistantship (2.0 cr)

**Advanced Writing Requirement (3 cr)**

The advanced writing requirement may be satisfied with one additional PHIL 3xxx course for at least 3 cr.

Take one of the following:
WRIT 31xx or PHIL 3xxx (3 cr)

**Applied Ethics**

This emphasis familiarizes students with major ethical theories and their applications in a number of fields and work situations. Beginning courses provide a framework for ethical thinking and decision making from a variety of theoretical orientations, along with introductory applications to social problems. Advanced courses apply this thinking to complex issues generated within specific fields such as medicine, technology, and the environment.

Principles that emerge from the study of applied ethics can complement a variety of majors and minors, as well as enhance students’ moral education and theoretical literacy for handling ethical problems that may emerge in a variety of careers and leadership roles in law, politics, and service organizations.

Students choose upper division electives from other disciplines to shape the major to their specific interests and postbaccalaureate plans.

**Lower Division Core (10 cr)**

- PHIL 1001 - Introduction to Philosophy [LE CAT7, HUMANITIES] (3.0 cr)
- PHIL 1003 - Ethics and Society [LE CAT8, LEIP CAT08, HUMANITIES, CDIVERSITY] (3.0 cr)
- PHIL 1008 - Critical Thinking [LE CAT2, LOGIC & QR] (4.0 cr)
  - or PHIL 1018 - Logic [LE CAT2, LOGIC & QR] (4.0 cr)

**Upper Division Core (13 cr)**

- PHIL 3281 - Ethical Theory (4.0 cr)
- PHIL 3900 - Colloquium for Majors (1.0 cr)
- PHIL 4900 - Seminar in Philosophy (4.0 cr)
- PHIL 3291 - Current Social Political Philosophy (4.0 cr)
  - or POL 3600 - Political Concepts (4.0 cr)

**History of Philosophy Elective (4 cr)**

- PHIL 3301 - Greek Philosophy (4.0 cr)
  - or PHIL 3303 - The Birth of Modern Philosophy (4.0 cr)
  - or PHIL 3421 - Eastern Philosophy (4.0 cr)

**Upper Division Application Areas (7 cr)**

Take 2 or more course(s) from the following:
- PHIL 3025 - Philosophy of Race and Racism (4.0 cr)
- PHIL 3222 - Medical Ethics (4.0 cr)
- PHIL 3231 - Law and Punishment (4.0 cr)
- PHIL 3242 - Values and Technology [LE CAT8, HUMANITIES] (3.0 cr)
  - or PHIL 3325 - Environmental Ethics [HUMANITIES, SUSTAIN] (4.0 cr)

**Advanced Writing Requirement (3 cr)**

The advanced writing requirement may be satisfied with one additional PHIL 3xxx course for at least 3 cr.

Take one of the following:
WRIT 31xx or PHIL 3xxx (3 cr)

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Duluth Campus
Philosophy Minor
Philosophy
College of Liberal Arts

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 16

The philosophy minor acquaints students with major figures and problems in our philosophical heritage and helps them develop critical-thinking skills.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Lower Division Electives (6 cr)
Most PHIL 1xxx courses will apply here.
Take 6 or more credit(s) from the following:
• PHIL 1001 - Introduction to Philosophy [LE CAT7, HUMANITIES] (3.0 cr)
• PHIL 1003 - Ethics and Society [LE CAT8, LEIP CAT08, HUMANITIES, CDIVERSITY] (3.0 cr)
• PHIL 1005 - Philosophy through Dialogue and Debate [COMM & LAN] (3.0 cr)
• PHIL 1007 - Philosophy and World Religions [LE CAT7, LEIP CAT07, HUMANITIES, GLOBAL PER] (3.0 cr)
• PHIL 1008 - Critical Thinking [LE CAT2, LOGIC & QR] (4.0 cr)
• PHIL 1018 - Logic [LE CAT2, LOGIC & QR] (4.0 cr)
• PHIL 1021 - Classical Mythology [LE CAT9, HUMANITIES] (3.0 cr)
• PHIL 1025 - Introduction to Cognitive Science [NAT SCI] (3.0 cr)

Upper Division Electives (10 cr)
Most PHIL 2xxx-5xxx level courses will apply here. (PHIL 5991 can contribute no more than 3 credits towards this requirement.)
Take 10 or more credit(s) from the following:
• PHIL 2001 - Existential Philosophy and the Arts [HUMANITIES] (3.0 cr)
• PHIL 2011 - Philosophy of Language [LE CAT3, SOC SCI] (3.0 cr)
• PHIL 2021 - Science and Pseudo-Science: Thinking about Weird Things [LE CAT8, HUMANITIES] (3.0 cr)
• PHIL 3025 - Philosophy of Race and Racism (4.0 cr)
• PHIL 3195 - Special Topics: (Various Titles to be Assigned) (3.0 - 9.0 cr)
• PHIL 3222 - Medical Ethics (4.0 cr)
• PHIL 3231 - Law and Punishment (4.0 cr)
• PHIL 3242 - Values and Technology [LE CAT8, HUMANITIES] (3.0 cr)
• PHIL 3245 - Philosophy of Art (3.0 cr)
• PHIL 3252 - Philosophy of Science (3.0 cr)
• PHIL 3281 - Ethical Theory (4.0 cr)
• PHIL 3291 - Current Social Political Philosophy (4.0 cr)
• PHIL 3301 - Greek Philosophy (4.0 cr)
• PHIL 3303 - The Birth of Modern Philosophy (4.0 cr)
• PHIL 3319 - 19th Century Philosophy (4.0 cr)
• PHIL 3320 - 20th Century Philosophy (4.0 cr)
• PHIL 3325 - Environmental Ethics [HUMANITIES, SUSTAIN] (4.0 cr)
• PHIL 3421 - Eastern Philosophy (4.0 cr)
• PHIL 3570 - Philosophy of Psychology (4.0 cr)
• PHIL 3655 - Theory of Knowledge (4.0 cr)
• PHIL 3900 - Colloquium for Majors (1.0 cr)
• PHIL 4900 - Seminar in Philosophy (4.0 cr)
• PHIL 5991 - Independent Study (1.0 - 3.0 cr)
• PHIL 5997 - Intern Teaching Assistantship (2.0 cr)
Duluth Campus
Political Science B.A.
History, Political Science & International Studies
College of Liberal Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 43 to 44
- Degree: Bachelor of Arts

This program prepares students for careers in government and business, the study of law, and graduate study in political science, domestic and international public policy, and related fields. It offers general liberal education coursework, specialized coursework for students majoring in other disciplines, and a related field for graduate students.

Students have considerable flexibility in designing their major to ensure it meets personal and professional interests. Up to two courses can be taken from the list of approved courses outside the department. Students should consult their department advisor to define the focus and coverage of their program and select courses in other disciplines, including second majors and minors. Students are encouraged to acquire collateral skills in areas such as statistics, computer applications, and foreign languages. At least eight political science credits must be taken at UMD. Students interested in graduate study should begin planning in their junior year. Many programs expect proficiency in statistical analysis and/or a foreign language.

Honors Requirements: Departmental honors in political science will be automatically granted to any student who is a political science major graduating with a grade point average of 3.80 or higher in political science courses taken at UMD or accepted for transfer to UMD. The average will be calculated using only political science courses.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

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Information current as of October 02, 2018
Program Requirements
1) A second field of study (either a minor or another major).
2) At least 8 political science credits must be taken at UMD.
3) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

Political Science Core (7 cr)
- POL 1011 - American Government and Politics [LE CAT6, SOC SCI] (3.0 cr)
- POL 4190 - The Senior Seminar (4.0 cr)

Introductory Political Science Courses (9-10 cr)
Most POL 1xxx-2xxx courses apply here. NOTE: One attempt of POL 1800 is applicable towards the major. If the course is taken twice the additional credits will not apply to the major, but will apply to the overall degree. POL 2700 is the preferred course for methodology. (Courses beyond the 9-10 credits will apply to the 'Additional Electives' area.)
Take 9 - 10 credit(s) from the following:
- POL 1015 - Introduction to Political Science (3.0 cr)
- POL 1050 - International Relations [LE CAT8, LEIP CAT08, GLOBAL PER] (3.0 cr)
- POL 1500 - Introduction to Comparative Politics [LE CAT8, LEIP CAT08, GLOBAL PER] (3.0 cr)
- POL 1610 - Introduction to Political Theory [LE CAT7, HUMANITIES] (3.0 cr)
- POL 1800 - Mock Trial (3.0 cr)
- POL 2700 - Methodology and Analysis [LOGIC & QR] (4.0 cr)

Political Science Electives
Choose 23 credits from the following options. At least 15 credits must come from POL 3xxx or higher level courses. One of the remaining introductory courses may be used including up to two courses in the 'Electives from Outside the Department' list. Students may satisfy this requirement by taking all POL courses at the 3xxx or higher course level.

Upper Division Electives in Political Science (15 cr)
Most POL 3xxx-4xxx courses apply here. (Courses beyond the 15 credits will apply to the 'Additional Electives' area.)
Take 15 or more credit(s) from the following:
- POL 3097 - Government Internship (1.0 - 12.0 cr)
- POL 3100 - Contemporary Issues in American Politics (3.0 cr)
- POL 3120 - Congress and the Presidency (4.0 cr)
- POL 3131 - Judicial Politics and Policy Making (3.0 cr)
- POL 3141 - Pol Parties & Polarization (3.0 cr)
- POL 3142 - Voting, Campaigning, and Elections (3.0 cr)
- POL 3143 - Political Psychology (3.0 cr)
- POL 3150 - American Constitutional Law I (3.0 cr)
- POL 3151 - American Constitutional Law II (3.0 cr)
- POL 3170 - Political Interest Groups and Individuals (3.0 cr)
- POL 3195 - Special Topics: (Various Titles to Be Assigned) (1.0 - 4.0 cr)
- POL 3197 - Nongovernmental Internship (1.0 - 12.0 cr)
- POL 3311 - Public Opinion and Polling Methods (4.0 cr)
- POL 3400 - Contemporary Issues in World Politics (4.0 cr)
- POL 3403 - American Foreign Policy (3.0 cr)
- POL 3420 - International Organization and Global Governance (3.0 cr)
- POL 3426 - Politics of International Law (4.0 cr)
- POL 3430 - Global Health Politics (3.0 cr)
- POL 3451 - Theories of International Relations (4.0 cr)
- POL 3456 - International Security: War and More (4.0 cr)
- POL 3511 - Politics of South Asia (4.0 cr)
- POL 3515 - Theories of Comparative Politics (4.0 cr)
- POL 3517 - Western European Political Systems (4.0 cr)
- POL 3518 - Transitional Politics of Asia (3.0 cr)
- POL 3525 - African Politics (3.0 cr)
- POL 3530 - Comparative Constitutional Law and Judicial Politics (3.0 cr)
- POL 3570 - Politics of Developing Nations (3.0 cr)
- POL 3575 - Latin American Politics and Development (4.0 cr)
• POL 3580 - Central American Politics (4.0 cr)
• POL 3600 - Political Concepts (4.0 cr)
• POL 3610 - Political Economy: An Introduction (3.0 cr)
• POL 3651 - Classical Political Thought (4.0 cr)
• POL 3652 - Modern Political Thought (4.0 cr)
• POL 4191 - Independent Study (1.0 - 4.0 cr)
• POL 4195 - Special Topics: (Various Titles to Be Assigned) (3.0 cr)
• POL 4910 - Teaching Assistantship in Political Science (1.0 - 2.0 cr)

Additional Electives (8 cr)
Take 2 to 3 courses totaling 8 or more credits. Additional POL 1xxx-4xxx level courses, two courses from the ‘Electives From Outside the Department’ course list, or courses across both areas will satisfy this requirement.
Take 0 - 3 course(s) from the following:
• POL 1xxx, 2xxx, 3xxx, 4xxx

*Electives From Outside the Department (optional)*
Take no more than 2 course(s) from the following:
• AMIN 3206 - Federal Indian Policy [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 3230 - American Indian Tribal Government and Law [SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 4230 - Introduction to Federal Indian Law [SOC SCI, CDIVERSITY] (3.0 cr)
• BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
• CRIM 3324 - Sociology of Criminal Law (3.0 cr)
• CRIM 3380 - Death Penalty (3.0 cr)
• ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
• ECON 4213 - Mathematical Economics (3.0 cr)
• ECON 4570 - Public Finance (3.0 cr)
• GEOG 4293 - Political Geography (3.0 cr)
• HIST 3265 - The Soviet Experiment: Russia, the USSR, and Contemporary Russia [LE CAT7, LEIP CAT07, GLOBAL PER] (4.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3465 - Twentieth Century China Politics (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• INTS 4100 - Seminar in International Studies (4.0 cr)
• PHIL 3231 - Law and Punishment (4.0 cr)
• PHIL 3291 - Current Social Political Philosophy (4.0 cr)
• SOC 3155 - Quantitative Research Methods and Analysis (4.0 cr)
• SOC 3156 - Qualitative Research Methods and Analysis (4.0 cr)
• WS 3100 - Feminist Thought [HUMANITIES, CDIVERSITY] (4.0 cr)
• WS 3600 - Ecofeminism: Theories and Sustainable Practices [SUSTAIN] (3.0 cr)

*STAT option (one course applicable)*
• STAT 1411 - Introduction to Statistics [LE CAT2, LOGIC & QR] (3.0 cr)
  or STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
• STAT 3611 - Introduction to Probability and Statistics (4.0 cr)
• STAT 5411 - Analysis of Variance (3.0 cr)
• STAT 5511 - Regression Analysis (3.0 cr)

Advanced Writing Requirement (3 cr)
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus

Political Science Minor
History, Political Science & International Studies
College of Liberal Arts

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 20 to 21

The political science minor can be designed specifically to supplement major programs in related disciplines or more broadly develop the political awareness, background, and critical faculties requisite to responsible citizenship.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

Requirements (20-21 credits)
Across the lower division and elective areas a total of 20-21 credits is required. Students are required to take a minimum of 14 credits of POL 3xxx-4xxx. Within these 14 credits, no more than one course may be from the "Electives From Outside the Department" area. A minimum of 8 credits must be taken at UMD. Students may satisfy this requirement by taking all POL courses at the 3xxx or higher course level.

Lower Division (0-7 cr)
Most POL 1xxx-2xxx courses apply here. If students elect to take a methodology course, POL 2700 is preferred. Take at most 7 credit(s) from the following:
• POL 1011 - American Government and Politics [LE CAT6, SOC SCI] (3.0 cr)
• POL 1015 - Introduction to Political Science (3.0 cr)
• POL 1050 - International Relations [LE CAT8, LEIP CAT08, GLOBAL PER] (3.0 cr)
• POL 1500 - Introduction to Comparative Politics [LE CAT6, LEIP CAT06, GLOBAL PER] (3.0 cr)
• POL 1610 - Introduction to Political Theory [LE CAT7, HUMANITIES] (3.0 cr)
• POL 1800 - Mock Trial (3.0 cr)
• POL 2700 - Methodology and Analysis [LOGIC & QR] (4.0 cr)

Electives (14 cr)
Most POL 3xxx-4xxx courses apply here. Students are required to take a minimum of 14 credits of POL 3xxx-4xxx within the minor. One course from the "Electives From Outside the Department" area may apply. Take 14 or more credit(s) from the following:
• POL 3001 - American Public Policy (3.0 cr)
• POL 3015 - State and Local Government (4.0 cr)
• POL 3025 - Popular Culture and Politics [HUMANITIES] (4.0 cr)
• POL 3040 - Women and Politics (3.0 cr)
• POL 3080 - Environment and Politics (3.0 cr)
• POL 3097 - Government Internship (1.0 - 12.0 cr)
• POL 3100 - Contemporary Issues in American Politics (3.0 cr)
• POL 3120 - Congress and the Presidency (4.0 cr)
• POL 3131 - Judicial Politics and Policy Making (3.0 cr)
• POL 3141 - Pol Parties & Polarization (3.0 cr)
• POL 3142 - Voting, Campaigning, and Elections (3.0 cr)
• POL 3143 - Political Psychology (3.0 cr)
• POL 3150 - American Constitutional Law I (3.0 cr)
• POL 3151 - American Constitutional Law II (3.0 cr)
• POL 3170 - Political Interest Groups and Individuals (3.0 cr)
• POL 3195 - Special Topics: (Various Titles to Be Assigned) (1.0 - 4.0 cr)
• POL 3197 - Nongovernmental Internship (1.0 - 12.0 cr)
• POL 3311 - Public Opinion and Polling Methods (4.0 cr)
• POL 3400 - Contemporary Issues in World Politics (4.0 cr)
• POL 3403 - American Foreign Policy (3.0 cr)
• POL 3420 - International Organization and Global Governance (3.0 cr)
• POL 3426 - Politics of International Law (4.0 cr)
• POL 3430 - Global Health Politics (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3456 - International Security: War and More (4.0 cr)
• POL 3511 - Politics of South Asia (4.0 cr)
• POL 3515 - Theories of Comparative Politics (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3518 - Transitional Politics of Asia (3.0 cr)
• POL 3525 - African Politics (3.0 cr)
• POL 3530 - Comparative Constitutional Law and Judicial Politics (3.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• POL 3575 - Latin American Politics and Development (4.0 cr)
• POL 3580 - Central American Politics (4.0 cr)
• POL 3600 - Political Concepts (4.0 cr)
• POL 3610 - Political Economy: An Introduction (3.0 cr)
• POL 3651 - Classical Political Thought (4.0 cr)
• POL 3652 - Modern Political Thought (4.0 cr)
• POL 4190 - The Senior Seminar (4.0 cr)
• POL 4191 - Independent Study (1.0 - 4.0 cr)
• POL 4195 - Special Topics: (Various Titles to Be Assigned) (3.0 cr)
• POL 4190 - Teaching Assistantship in Political Science (1.0 - 2.0 cr)

Electives From Outside the Department (one course)

Take no more than 1 course(s) from the following:
• AMIN 3206 - Federal Indian Policy [LE CAT 8, LECD CAT 08, SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 3230 - American Indian Tribal Government and Law [SOC SCI, CDIVERSITY] (3.0 cr)
• AMIN 4230 - Introduction to Federal Indian Law [SOC SCI, CDIVERSITY] (3.0 cr)
• CRIM 3324 - Sociology of Criminal Law (3.0 cr)
• CRIM 3380 - Death Penalty (3.0 cr)
• ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
• ECON 4213 - Mathematical Economics (3.0 cr)
• GEOG 4393 - Political Geography (3.0 cr)
• HIST 3265 - The Soviet Experiment: Russia, the USSR, and Contemporary Russia [LE CAT 7, LEIP CAT 07, GLOBAL PER] (4.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3465 - Twentieth Century China Politics (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• INTS 4100 - Seminar in International Studies (4.0 cr)
• PHIL 3231 - Law and Punishment (4.0 cr)
• PHIL 3291 - Current Social Political Philosophy (4.0 cr)
• SOC 3155 - Quantitative Research Methods and Analysis (4.0 cr)
• SOC 3156 - Qualitative Research Methods and Analysis (4.0 cr)
• WS 3100 - Feminist Thought [HUMANITIES, CDIVERSITY] (4.0 cr)
• WS 3600 - Ecofeminism: Theories and Sustainable Practices [SUSTAIN] (3.0 cr)

STAT option
• STAT 1411 - Introduction to Statistics [LE CAT 2, LOGIC & QR] (3.0 cr)
or STAT 2411 - Statistical Methods [LE CAT 2, LOGIC & QR] (3.0 cr)
or STAT 3611 - Introduction to Probability and Statistics (4.0 cr)
or STAT 5411 - Analysis of Variance (3.0 cr)
or STAT 5511 - Regression Analysis (3.0 cr)
**Duluth Campus**  
**Professional Writing Minor**  
*English Linguistics and Writing Studies*  
**College of Liberal Arts**

- Program Type: Undergraduate free-standing minor  
- Requirements for this program are current for Fall 2018  
- Required credits in this minor: 22 to 23

The professional writing minor develops writing, reading, and rhetorical expertise relevant to professional communication. Emphasizing the production and analysis of texts and practice in varied writing techniques, the minor also provides a foundation in the study of professional writing as a field of inquiry.

**Program Delivery**

This program is available:

- via classroom (the majority of instruction is face-to-face)

### Minor Requirements

Students majoring in writing studies must complete a minor or second major in a field other than professional writing or Information design.

#### Lower Division Core (6 cr)

- **WRIT 1506** - Literacy, Technology and Society [LE CAT7, HUMANITIES] (3.0 cr)
- **WRIT 2506** - Introduction to Writing Studies (3.0 cr)

#### Upper Division Core (10 cr)

The **WRIT 31xx** - Advanced Writing course requirement within a major may also apply to this requirement.

- **WRIT 31xx** - Adv Writ (3.0 cr)
- **WRIT 4200** - Writing and Cultures (3.0 cr)
- **WRIT 4250** - New Media Writing (3.0 cr)
- **WRIT 4506** - Capstone Course: Senior Portfolio Preparation (1.0 cr)

**Professional Writing Electives (3 cr)**

Take 1 or more courses from the following totaling at least 3 credits. (WRIT 1120 does not satisfy this requirement.)

- **WRIT 1xxx-4xxx**

**Free Electives (3-4 cr)**

Take one or more courses from the following areas for a total of at least 3 credits. (WRIT 1120 does not satisfy this requirement.)

- **COMM 1xxx-5xxx**
- **ENGL 1xxx-5xxx**
- **FMIS 1xxx-5xxx**
- **JOUR 1xxx-5xxx**
- **LING 1xxx-5xxx**
- **TH 1xxx-5xxx**
- **WRIT 1xxx-5xxx**
Duluth Campus
Sociology B.A.
Anthropology | Sociology & Criminology
College of Liberal Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 45
• Degree: Bachelor of Arts

Sociology focuses on the relationships between social structure and the dynamics of establishing, maintaining, and changing patterns of human social behavior. The program is built around a theoretical-methodological core with courses integrated to develop students' conceptual and research competence. These courses focus on social psychology, social organization, social change, and criminology. The major provides a background for careers in human services and business and preparation for related graduate and professional school study.

Honors requirements: The department honors program recognizes majors who demonstrate outstanding academic performance, provides special educational opportunities for such students, and encourages the development of specialty areas within the major. Honors students participate in independent research, working closely with a faculty member. Qualified majors apply to the honors program before the end of the second week of the first semester of their senior year. See department or department website for further information.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current University of Minnesota Duluth students who change colleges to College of Liberal Arts are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements

1) A second field of study (either a minor or another major).

2) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

**Lower Division Core (8 cr)**
A grade of C or better is required in each course.

- SOC 1101 - Introduction to Sociology [LE CAT6, LECD CAT06, SOC SCI, C DIVERSITY] (4.0 cr)
- SOC 2155 - Introduction to Research Methods and Analysis (4.0 cr)

**Upper Division Core (15 cr)**
After successfully completing SOC 4587, a student must wait at least one semester before registering for SOC 4597. Students intern in a setting related to their career interests. (Students also majoring in psychology may request to substitute PSY 3020 for SOC 3155. See the department head for approval.)

- SOC 3155 - Quantitative Research Methods and Analysis (4.0 cr)
- SOC 4111 - Sociological Theory (4.0 cr)
- SOC 4587 - Internship Preparation (1.0 cr)
- SOC 4597 - Internship (6.0 - 8.0 cr)

**Inequality Course (3 cr)**
Students must take at least one course listed below to fulfill this requirement. Additional SOC inequality courses may apply as elective credit towards the major.

Take 1 or more course(s) from the following:
- CRIM 4323 - Women and Justice (3.0 cr)
- CRIM 4340 - Race, Crime and Justice (3.0 cr)
- SOC 3330 - The American Civil Rights Movement [SOC SCI, C DIVERSITY] (3.0 cr)
- SOC 3945 - Social Stratification (3.0 cr)
- SOC 4947 - Sociology of Gender Identities and Systems (3.0 cr)
- SOC 4949 - Race and Ethnic Relations (3.0 cr)

**Sociology Electives (12 cr)**
Most SOC 3xxx-4xxx level courses apply here. Additional SOC courses taken from the inequality area will apply here.

Take 12 or more credit(s) from the following:
- SOC 3306 - Deviance (3.0 cr)
- SOC 3821 - Sociology of Community (3.0 cr)
- SOC 3831 - Organizations and Society (4.0 cr)
- SOC 3901 - Social Change and Social Policy (3.0 cr)
- SOC 4370 - Sociology of Mental Health and Illness (3.0 cr)
- SOC 4860 - Environmental Sociology [SUSTAIN] (3.0 cr)
- SOC 4910 - Teaching Assistantship in Sociology (1.0 - 3.0 cr)
- SOC 4925 - Sociology of Race (3.0 cr)
- SOC 4935 - Peace Studies (3.0 cr)
- SOC 4960 - Graveyard Culture (4.0 cr)
- SOC 4981 - Social Movements, Protest and Change (4.0 cr)
- SOC 4982 - Political Sociology and the Global Economy (4.0 cr)
- SOC 4985 - Critical Animal Studies (4.0 cr)
- SOC 4991 - Independent Study in Sociology (1.0 - 6.0 cr)
- SOC 4999 - Honors Project Sociology (1.0 - 4.0 cr)
- SOC 3701 - Social Psychology [SOC SCI] (3.0 cr)
  or PSY 3201 - Social Psychology (3.0 cr)

**Advanced Required Elective (3 cr)**
Students may apply a SOC 1xxx-4xxx course to this area.

Take 3 or more credit(s) from the following:
- AAAS 3xxx-4xxx
  or ANTH 3xxx-4xxx
  or SOC 1xxx-4xxx

**Advanced Writing Requirement (3 cr)**
WRIT 3140 or 3160 are recommended.
WRIT 31xx - Adv Writing (3 cr)
Duluth Campus
Sociology Minor
Anthropology, Sociology & Criminology
College of Liberal Arts

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 20 to 21

The sociology minor introduces students to central sociological concepts, theories, and research methods. Students are allowed flexibility in exploring substantive courses relevant to their interests.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Lower Division Core (8 cr)
A grade of C or better is required in each course.
SOC 1101 - Introduction to Sociology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
SOC 2155 - Introduction to Research Methods and Analysis (4.0 cr)

Inequality Course (3 cr)
Additional SOC inequality courses may apply as elective credit towards the minor.
Take 3 or more credit(s) from the following:
• CRIM 4323 - Women and Justice (3.0 cr)
• CRIM 4340 - Race, Crime and Justice (3.0 cr)
• SOC 3330 - The American Civil Rights Movement [SOC SCI, CDIVERSITY] (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SOC 4947 - Sociology of Gender Identities and Systems (3.0 cr)
• SOC 4949 - Race and Ethnic Relations (3.0 cr)

Electives (9-10 cr)
Most SOC 3xxx-4xxx courses apply here. SOC 3155, 4587, 4597 cannot apply towards the sociology minor.
Take 9 or more credit(s) from the following:
• CRIM 3322 - Law and Society (3.0 cr)
• SOC 3156 - Qualitative Research Methods and Analysis (4.0 cr)
• SOC 3306 - Deviance (3.0 cr)
• SOC 3821 - Sociology of Community (3.0 cr)
• SOC 3831 - Organizations and Society (4.0 cr)
• SOC 3901 - Social Change and Social Policy (3.0 cr)
• SOC 4111 - Sociological Theory (4.0 cr)
• SOC 4370 - Sociology of Mental Health and Illness (3.0 cr)
• SOC 4860 - Environmental Sociology [SUSTAIN] (3.0 cr)
• SOC 4910 - Teaching Assistantship in Sociology (1.0 - 3.0 cr)
• SOC 4925 - Sociology of Rape (3.0 cr)
• SOC 4935 - Peace Studies (3.0 cr)
• SOC 4980 - Graveyard Culture (4.0 cr)
• SOC 4981 - Social Movements, Protest and Change (4.0 cr)
• SOC 4982 - Political Sociology and the Global Economy (4.0 cr)
• SOC 4985 - Critical Animal Studies (4.0 cr)
• SOC 4991 - Independent Study in Sociology (1.0 - 6.0 cr)
• SOC 4999 - Honors Project Sociology (1.0 - 4.0 cr)
• SOC 3701 - Social Psychology [SOC SCI] (3.0 cr)
or PSY 3201 - Social Psychology (3.0 cr)
Duluth Campus
Tribal Administration & Governance B.A.
American Indian Studies
College of Liberal Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 50 to 51
• Degree: Bachelor of Arts

The major is designed to prepare students to work for tribes and governmental and non-governmental entities that work closely with tribes. Students may select from two tracks: American Indian studies OR business administration certificate. The core requirements for the major include courses focused on tribal sovereignty, tribal governance, and federal Indian law and policy. The curriculum is based on studying the interrelationships between federal and tribal governments and the methods used by Native Nations to administer programs. Students will learn the history of federal-tribal-state relations; learn the roles of tribal leaders and administrators; and learn the laws, polices, and issues that impact tribal governments.

The major is flexible to accommodate a variety of student needs. All required courses for the major are offered online. Students may either transfer to UMD with an AA degree or the Minnesota Transfer Curriculum and complete the required courses for the major completely online in two years OR students who are beginning their undergraduate studies may come to UMD and take courses to fulfill the UMD liberal education program requirements while taking the online courses.

Students who graduate with a BA in tribal administration and governance will:

Demonstrate the ability to summarize, compare, and contrast tribal governance practices, constitutions, and statutes.
Demonstrate understanding of settler policies and legal principles concerning Indian nations as well as settler governmental relationships with tribal governments.
Formulate effective approaches to strategic, project, and operations management in tribal contexts.
Demonstrate capacity to apply the fundamentals of relevant business practices for tribal administration.
Demonstrate capacity to summarize, analyze, synthesize, and apply the leadership qualities required of tribal administrators.

Program Delivery
This program is available:
• completely online (all program coursework can be completed online)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1-2 cr)
Transfer students with 24 or more credits, and current UMD students who change colleges to CLA, are exempt from this requirement.
New first-year students with 24 or more PSEO credits may request a waiver from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
Students may declare this major at any time but once they begin the major they should take the TAG classes offered each term (with the exception of internship which should be taken their last term).

Required courses (31 cr)
- TAG 2801 - Introduction to Tribal Administration and Governance (3.0 cr)
- TAG 2820 - Foundations of Indigenous Leadership (3.0 cr)
- TAG 3206 - Federal Indian Policy [SOC SCI, CDIVERSITY] (3.0 cr)
- TAG 3230 - American Indian Tribal Government and Law [SOC SCI, CDIVERSITY] (3.0 cr)
- TAG 3810 - Fundamentals of Tribal Strategic Management (3.0 cr)
- TAG 3820 - Fundamentals of Tribal Project Management (3.0 cr)
- TAG 3997 - Internship in American Indian Studies (4.0 - 8.0 cr)
- TAG 4230 - Introduction to Federal Indian Law [SOC SCI, CDIVERSITY] (3.0 cr)
- TAG 4250 - American Indian Diplomacy: Treaties, Compacts, and Agreements [GLOBAL PER] (3.0 cr)
- TAG 4840 - Current Issues and Opportunities in Tribal Administration and Governance (3.0 cr)

Advanced Writing Requirement (3 cr)
- WRIT 31xx - Adv Writing (3 cr)

Program Sub-plans
Students are required to complete one of the following sub-plans.

American Indian Studies
American Indian Studies (6 cr)
- AMIN 3830 - Fundamentals of Tribal Operations Management (3.0 cr)
- AMIN 4810 - Business Processes in Tribal Administration (3.0 cr)

Electives (9 cr)
Take 9 additional credits of AMIN courses, 6 of which must be at 3xxx or above. Or relevant courses by Department Head approval.

Optional elective (one course)
- AMIN 1xxx-2xxx
- or AMIN 3xxx-4xxx (at least 6 cr)
- AMIN 3xxx-4xxx

Business Administration Certificate
Students will receive a Certificate in Business Administration from the Labovitz School of Business and Economics (LSBE).

Certificate of Business Administration (16 cr)
These courses are provided in an online format and can be taken in any order. See the Class Schedule for variable start dates of courses (1st half, 2nd half or full-term). Up to two of the following courses may be substituted with equivalent classroom classes.
- BUS 2100 - Fundamentals of Accounting (2.0 cr)
- BUS 2200 - Fundamentals of Economics (2.0 cr)
- BUS 2300 - Fundamentals of Operations Management (2.0 cr)
- BUS 2400 - Fundamentals of Organizational Management (2.0 cr)
- BUS 2500 - Fundamentals of Applied Statistics (2.0 cr)
- BUS 2600 - Fundamentals of Financial Management (2.0 cr)
- BUS 2700 - Fundamentals of Marketing (2.0 cr)
- BUS 2800 - Fundamentals of Human Resource Management (2.0 cr)
Women, Gender and Sexuality Studies B.A.

College of Liberal Arts

- Program Type: Baccalaureate
- Required credits for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 39
- Degree: Bachelor of Arts

Women, Gender and Sexuality Studies is an interdisciplinary field that includes the study of: 1) the experiences, conditions, and social realities of women of different races, ethnicities, nationalities, religions, classes, abilities, and sexual orientations in a global context; 2) the ways in which gender distinctions and the construction and intersection of gender, sexuality, race, and class have affected human lives, and 3) feminist scholarship.

Academically, the department seeks to provide students with a solid background in knowledge about gender, sexuality, race, class, and international issues; feminist analysis; critical thinking; and oral and written communication; and actively engage students in the generation of new knowledge and areas of inquiry. The department aims to prepare students for meaningful participation and contribution in an inclusive and diverse society, to be local, national, and global citizens, and to participate effectively and contribute meaningfully in a diverse workplace. Finally, the department intends to provide a nurturing environment for the whole person to help each student find her or his own strengths, gifts, and path, as well as to raise awareness about the way that path concerns and connects with others in local and global contexts.

Women, Gender and Sexuality Studies majors find meaningful work in a variety of fields, including work with non-profits, international agencies, peace and justice organizations, LGBTQ rights organizations, medicine and midwifery, public health, social work, education, law, business, and the arts.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current UMD students who change colleges to CLA are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1) A second field of study (either a minor or another major). Students majoring in WGSS and minoring in LGBTQ Studies must declare a third field of study (either another major or minor). This addresses the overlapping of courses across programs.

2) Advanced writing requirement: WRIT 31xx must be completed before taking WS 4000.

3) Study abroad is encouraged for all students and the department makes every effort to facilitate such experiences.

Core Courses (17 cr)
- WS 1000 - Introduction to Women's and Gender Studies [LE CAT7, LECD CAT07, CULT DIV, SOC SCI, CDIVERSITY] (3.0 cr)
- WS 2101 - Women, Race, and Class [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
- WS 3100 - Feminist Thought [HUMANITIES, CDIVERSITY] (4.0 cr)
- WS 4000 - Seminar (4.0 cr)
- WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
  or WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)

Electives (18 cr)
Most WS 3xxx-5xxx courses may apply here. Students must take at least 12 credits from WS within the 18 electives. Students may apply two courses from the "related courses (optional)" area towards this requirement.

NOTE: Only 3 cr of WS 3891 may apply in the major. Only 6 cr of WS 3897 may apply in the major. Students may apply no more than 9 cr total toward the major from the following combination of courses: WS 3891, 3897, 5897, and 5991.

Take 12 or more credit(s) from the following:
- WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
- WS 3150 - Women-Identified Culture [CDIVERSITY] (3.0 cr)
- WS 3200 - Women's Autobiographies [GLOBAL PER] (3.0 cr)
- WS 3250 - Women, Peace and War [GLOBAL PER] (3.0 cr)
- WS 3300 - Women and Spirituality [HUMANITIES, CDIVERSITY] (3.0 cr)
- WS 3350 - Women and the Law [CDIVERSITY] (3.0 cr)
- WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)
- WS 3595 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
- WS 3600 - Ecofeminism: Theories and Sustainable Practices [SUSTAIN] (3.0 cr)
- WS 3700 - Women and Love (3.0 cr)
- WS 3750 - Voices of African Women [GLOBAL PER] (3.0 cr)
- WS 3775 - Gender, Globalization and Food [SUSTAIN] (3.0 cr)
- WS 3800 - Feminist Activism and Community Organizing (4.0 cr)
- WS 3595 - Special Topics: (Various Titles to be Assigned) (3.0 cr)
  Take 0 - 3 credit(s) from the following:
  - WS 3891 - Independent Study (1.0 - 3.0 cr)
  Take 0 - 6 credit(s) from the following:
  - WS 3891 - Independent Study (1.0 - 3.0 cr)
  Take 0 - 9 credit(s) from the following:
  - WS 3891 - Independent Study (1.0 - 3.0 cr)
  - WS 3897 - Internship (1.0 - 9.0 cr)
  - WS 3897 - Teaching Internship in Women's Studies (1.0 - 2.0 cr)
  - WS 5991 - Independent Study (1.0 - 6.0 cr)

Related Courses (optional)
Most LGBT 3xxx courses apply here.
Take no more than 2 course(s) from the following:
- AMIN 3450 - American Indian Women [CDIVERSITY] (3.0 cr)
- ANTH 3080 - Cultural Constructions of the Body (4.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ARTH 3140 - Women in Art/Visual Culture in Latin America (3.0 cr)
- CRIM 4323 - Women and Justice (3.0 cr)
- ENGL 2581 - Women Writers [LE CAT9, LECT CAT09, HUMANITIES] (4.0 cr)
- HLTH 3118 - Women's Health Issues (3.0 cr)
- LGBT 3000 - Queer Theory (3.0 cr)
- LGBT 3151 - Queer Cinema in International Perspective [GLOBAL PER] (3.0 cr)
- LGBT 3152 - History of the International Homosexual Rights Movement (1895 - present) [GLOBAL PER] (3.0 cr)
• LGBT 3153 - Queer Media [CDIVERSITY] (3.0 cr)
• POL 3040 - Women and Politics (3.0 cr)
• PSY 3215 - Topics in Human Sexuality (3.0 cr)
• SOC 4925 - Sociology of Rape (3.0 cr)
• SOC 4947 - Sociology of Gender Identities and Systems (3.0 cr)

Advanced Writing Requirement (3 cr)
Advanced writing requirement must be completed before taking WS 4000.
WRIT 31xx - Adv Writing (3 cr)
Women, Gender and Sexuality Studies Minor

Anthropology, Sociology & Criminology

College of Liberal Arts

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 18

The women, gender and sexuality studies minor is designed to acquaint students with the past and present status, contributions, and concerns of women of diverse backgrounds; the many ways in which gender distinctions have affected human lives, as well as the construction and intersection of gender, race, and class; feminist scholarship; and critical and theoretical analyses and reflection upon these topics.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

Core (3 cr)

- WS 1000 - Introduction to Women's and Gender Studies [LE CAT7, LEC1 CAT07, CULT DIV, SOC SCI, CDIVERSITY] (3.0 cr)
  or WS 2101 - Women, Race, and Class [LE CAT8, LEC1 CAT08, SOC SCI, CDIVERSITY] (3.0 cr)

Electives (15 cr)
Students must take at least 12 credits from women's studies (WS) courses. Students may apply a maximum of one course from the "related courses (optional)" area towards this requirement. NOTE: Students may apply no more than 3 credits total toward the minor from the following combination of courses: WS 3891, 3897, 5897, and 5991.

WS Electives
Most WS 2xxx-5xxx courses apply here.
Take 12 or more credit(s) from the following:
• WS 2001 - Introduction to Lesbian Gay Bisexual and Transgender Studies [LE CAT8, LEC1 CAT08, CDIVERSITY] (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3100 - Feminist Thought [HUMANITIES, CDIVERSITY] (4.0 cr)
• WS 3150 - Women-Identified Culture [CDIVERSITY] (3.0 cr)
• WS 3200 - Women's Autobiographies [GLOBAL PER] (3.0 cr)
• WS 3250 - Women, Peace and War [GLOBAL PER] (3.0 cr)
• WS 3300 - Women and Spirituality [HUMANITIES, CDIVERSITY] (3.0 cr)
• WS 3350 - Women and the Law [CDIVERSITY] (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)
• WS 3595 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
• WS 3600 - Ecofeminism: Theories and Sustainable Practices [SUSTAIN] (3.0 cr)
• WS 3700 - Women and Love (3.0 cr)
• WS 3750 - Voices of African Women [GLOBAL PER] (3.0 cr)
• WS 3775 - Gender, Globalization and Food [SUSTAIN] (3.0 cr)
• WS 3800 - Feminist Activism and Community Organizing (4.0 cr)
• WS 4000 - Seminar (4.0 cr)
• WS 5595 - Special Topics: (Various Titles to Be Assigned) (3.0 cr)
Take at most 3 credit(s) from the following:
• WS 3891 - Independent Study (1.0 - 3.0 cr)
• WS 3897 - Internship (1.0 - 9.0 cr)
• WS 5897 - Teaching Internship in Women's Studies (1.0 - 2.0 cr)
• WS 5991 - Independent Study (1.0 - 4.0 cr)

Related Courses (optional)
Most LGBT 3xxx courses apply here.
Take no more than 1 course(s) from the following:
• AMIN 3450 - American Indian Women [CDIVERSITY] (3.0 cr)
• ANTH 3080 - Cultural Constructions of the Body (4.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• ARTH 3140 - Women in Art/Visual Culture in Latin America (3.0 cr)
• CRIM 4323 - Women and Justice (3.0 cr)
• ENGL 2581 - Women Writers [LE CAT9, LEC0D CAT09, HUMANITIES] (4.0 cr)
• HLTH 3118 - Women's Health Issues (3.0 cr)
• LGBT 3000 - Queer Theory (3.0 cr)
• LGBT 3151 - Queer Cinema in International Perspective [GLOBAL PER] (3.0 cr)
• LGBT 3152 - History of the International Homosexual Rights Movement (1895 - present) [GLOBAL PER] (3.0 cr)
• LGBT 3153 - Queer Media [CDIVERSITY] (3.0 cr)
• POL 3040 - Women and Politics (3.0 cr)
• PSY 3215 - Topics in Human Sexuality (3.0 cr)
• SOC 4925 - Sociology of Rape (3.0 cr)
• SOC 4947 - Sociology of Gender Identities and Systems (3.0 cr)
Duluth Campus
Writing Studies B.A.
English Linguistics and Writing Studies
College of Liberal Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 38 to 41
• Degree: Bachelor of Arts

The major in writing studies explores writing as a field of inquiry: its production, its circulation, its uses, and its role in the development of individuals, professional communities, and societies. The major begins with the history of writing practices, genres, systems of production and distribution. It uses the tools of qualitative, quantitative, and humanistic research to advance those explorations. It culminates in a practical examination of writing in traditional and emerging technologies.

The writing curriculum synthesizes 1) knowledge and experience with writing technologies from a liberal arts, as well as a technical, perspective; 2) practice in applying principles of rhetoric, design, cultural theory, and creative thinking to the production of professional writing projects; and 3) communities and other audiences. Students develop writing skills relevant to professional situations (document design and delivery, the development of varied writing techniques, and persuasive argument) with an understanding of writing’s ethical and social implications. They also think reflectively and critically about their role as writers for professional and civic life. Students are encouraged to participate in UMD-sponsored internships in professional writing, corporate communication, editing, and publishing.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current University of Minnesota Duluth students who change colleges to College of Liberal Arts are exempt from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
Students majoring in Writing Studies must complete a minor or second major in a field other than professional writing or digital writing, literature & design minors.

Required Core (12 cr)
- WRIT 1506 - Literacy, Technology and Society [LE CAT7, HUMANITIES] (3.0 cr)
- WRIT 2506 - Introduction to Writing Studies (3.0 cr)
- WRIT 4200 - Writing and Cultures (3.0 cr)
- WRIT 4250 - New Media Writing (3.0 cr)

Advanced Writing Requirement (3 cr)
- WRIT 31xx - Adv Writing (3 cr)

Required Capstone (1 cr)
- WRIT 4506 - Capstone Course: Senior Portfolio Preparation (1.0 cr)

Writing Electives (15 cr)
Take 15 credits from the following list. Most WRIT 1xxx-4xxx courses apply here. (This excludes WRIT 1120 and 31xx.) WRIT 4197-Internship may be repeated for a total of 6 credits.
Take 15 or more credit(s) from the following:
- WRIT 1006 - Journal and Memoir Writing [LE CAT9] (3.0 cr)
- WRIT 2400 - Language of Advertising (3.0 cr)
- WRIT 2595 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
- WRIT 4100 - Introduction to Grant Writing and Project Planning (3.0 cr)
- WRIT 4197 - Internship in Writing (1.0 - 3.0 cr)
- WRIT 4220 - Document Design and Graphics (3.0 cr)
- WRIT 4222 - Electronic Publication (4.0 cr)
- WRIT 4230 - Web Design and Digital Culture (3.0 cr)
- WRIT 4260 - Visual Rhetoric and Culture (3.0 cr)
- WRIT 4300 - Research Methods for the Study of Writing (3.0 cr)
- WRIT 4591 - Independent Study (1.0 - 3.0 cr)

Related Field Electives (6-9 cr)
Take any 2-3 1xxx-4xxx level courses in COMM, ENGL, FMIS, JOUR, LING or TH, totaling at least 6 credits.
COMM 1xxx-4xxx
or ENGL 1xxx-4xxx
or FMIS 1xxx-4xxx
or JOUR 1xxx-4xxx
or LING 1xxx-4xxx
or TH 1xxx-4xxx
Duluth Campus

Coaching Minor

D Applied Human Sciences

College of Education and Human Service Professions

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 21

The coaching minor program prepares graduates to coach in a variety of sites, including schools, public agencies, and youth organizations. The curriculum prepares students to assess, plan, administer, and instruct student athletes.

The coaching minor meets or exceeds the National Association for Sport and Physical Education (NASPE) standards for coaching, with emphasis in coaching and administrative theory, psychology, medical and nutritional concerns, risk management, and skill development. Requirements and admission applications can be obtained from the Department of Health, Physical Education, and Recreation (HPER).

Postbaccalaureate students seeking a coaching minor should have their transcript evaluated by the HPER department.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Coaching Minor Courses (17 cr)
- CC 3117 - Functional Anatomy and Sport Injury Management (3.0 cr)
- CC 3150 - Coaching Methods (3.0 cr)
- CC 3160 - Psychological Aspects of Coaching and Athletic Performance (3.0 cr)
- CC 3161 - Administrative Aspects of Coaching (3.0 cr)
- CC 3997 - Coaching Practicum (2.0 cr)
- PETE 2400 - Applied Exercise Science (3.0 cr)

Electives (4 cr)
Take 4 or more credit(s) from the following:
- CC 3170 - Coaching and Officiating Football (2.0 cr)
- CC 3171 - Coaching and Officiating Basketball (2.0 cr)
- CC 3172 - Coaching and Officiating Volleyball (2.0 cr)
- CC 3174 - Coaching and Officiating Soccer (2.0 cr)
- CC 3176 - Coaching and Officiating Track and Field (2.0 cr)
- CC 3179 - Coaching and Officiating Softball (2.0 cr)
Duluth Campus

Communication Sciences and Disorders B.A.Sc.
Communication Sciences & Disorders
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 65 to 68
- Degree: Bachelor of Applied Science

The B.A.Sc. in communication sciences and disorders prepares students for admission to professional graduate degree or licensure programs in speech-language pathology, audiology, or education of the hearing impaired. This pre-professional undergraduate program also prepares students to work as clinical aides to communication disorders specialists working in a variety of human service and health care settings.

The program includes the study of phonetics, the anatomy and physiology of the speech and hearing mechanisms, the normal development of speech and language, and the nature and treatment of disorders of speech, language, and hearing disorders.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 12 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 3.00 already admitted to the degree-granting college
- 3.00 transferring from another University of Minnesota college
- 3.00 transferring from outside the University

Upon completion of at least 12 credits at UMD and an overall GPA of 3.0, including transfer courses, a student is admitted to the program; freshman and transfer students are usually admitted to pre-major status before admission to this major. Pre-CSD majors or students with other declared majors who have an overall University of Minnesota cumulative GPA of 3.0, including transfer courses and have completed a minimum of 12 credits, may declare a CSD major. When a student is ready to declare a CSD major, his/her CSD academic adviser notifies the CEHSP Academic Services Office to institute the change in statue from pre-major to major; students must be admitted majors in order to enroll in any upper division core courses. Mandatory advising is in effect for all students with fewer then 60 credits and for students whose cumulative GPAs fall below 3.00 (including transfer work). For information about University of Minnesota admission requirements, visit the Office of Admissions website.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Compliance with general regulations governing granting of degrees.
2. Students seeking two degrees (e.g., a BA and B.A.Sc.) must fulfill the major requirements for both degrees.
3. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for 1 credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Lower Division Core (6 cr)
CSD 1100 - Phonetics [LE CAT3] (2.0 cr)
CSD 2230 - Introduction to Human Communication Disorders [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
CSD 2400 - Clinical Observation of Communication Disorders (1.0 cr)

Junior Band (19 cr)
Must be admitted to the CSD major. Courses should be taken concurrently.
Fall (10 cr)
CSD 3103 - Anatomy of Speech and Hearing Mechanisms (3.0 cr)
CSD 3131 - Language Development (4.0 cr)
CSD 3150 - Fundamentals and Clinical Applications of Speech Science (3.0 cr)
Spring (9 cr)
CSD 3160 - Fundamentals of Hearing Science (3.0 cr)
CSD 3200 - Articulation and Phonological Disorders (3.0 cr)
CSD 3232 - Language Disorders (3.0 cr)

Senior Band (18 cr)
Fall (9 cr)
CSD 3241 - Foundations of Treatment in Communication Disorders I (3.0 cr)
CSD 3010 - Introductory Statistics for the Behavioral Sciences (3.0 cr)
CSD 4400 - Hearing Disorders and Evaluation (3.0 cr)
Spring (9 cr)
CSD 4150 - Neuroanatomy and Neurophysiology in Communication Sciences and Disorders (3.0 cr)
CSD 4241 - Foundations of Treatment in Communication Disorders II (3.0 cr)
CSD 5400 - Rehabilitative Procedures for the Hard of Hearing (3.0 cr)

Additional Requirements (21-24 cr)
Advanced Writing
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or WRIT 3150 - Advanced Writing: Science (3.0 cr)
or WRIT 3160 - Advanced Writing: Social Sciences (3.0 cr)

Biology
BIOL 1001 - Biology and Society [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
or BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)

Communication
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)

Physics
PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
or PHYS 1011 - Conceptual Physics [LE CAT5, NAT SCI] (3.0 cr)

Psychology
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
Certification and Licensure
In order to work in the state of Minnesota, speech-language pathologists must hold a master's degree, a certificate of clinical competence from the American speech-Language-Hearing association (ASHA), and license from either the MN Department of Health or MN Department of Education. Audiologists must hold a doctoral degree, a certificate of clinical competency from ASHA or board certification from the American Academy of Audiology, and a license from the MN Department of Health.

Accreditation
The graduate program is accredited by the Council of Academic Accreditation (CAA) of the American Speech-Language-Hearing Association (ASHA). CAA accreditation is recognized by the US Department of Education and the Council for Higher Education.
Duluth Campus

Deaf Studies Minor

College of Education and Human Service Professions

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 16 to 22

Deaf studies minor offers American Sign Language (ASL) competency and cultural knowledge for individuals who need or wish to communicate with employees, co-workers, family members, and friends. ASL is present in every realm of modern life, as deaf, hard of hearing, and deaf-blind people seek education and equitable employment. The minor also meets the needs of students interested in pursuing further study in sign language interpreting or deaf education.

While the deaf studies minor complements degrees in virtually any field of study, it is particularly advantageous to pair with majors in education, human services, liberal arts, theatre, and business.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Core Language Requirements (9-15 cr)

Students with previous language study may be exempt from some core requirements and should consult the department about placement.

- ASL 2001 - Beginning American Sign Language I [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
- ASL 2002 - Beginning American Sign Language II [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
- ASL 3003 - Intermediate American Sign Language I [COMM & LAN] (3.0 cr)
- ASL 3004 - Intermediate American Sign Language II [COMM & LAN] (3.0 cr)
- ASL 4005 - Advanced American Sign Language [COMM & LAN] (3.0 cr)

Core Requirements (4 cr)

- ASL 4110 - Deaf Culture (3.0 cr)
- ASL 4298 - American Sign Language Skill Building Workshop (1.0 cr)

Electives (3 cr)

Take 3 or more credit(s) from the following:

- ASL 4100 - Linguistics of American Sign Language (3.0 cr)
- ASL 4105 - History of the American Deaf Community [CDIVERSITY] (3.0 cr)
- ASL 4295 - Special Topics: Various Titles to be assigned (1.0 - 3.0 cr)
Early Childhood Studies B.A.Sc.

Education

College of Education and Human Service Professions

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 97 to 99
• Degree: Bachelor of Applied Science

The bachelor of applied science degree in early childhood studies (ECS) is designed to prepare knowledgeable and skilled professionals in the field of early childhood studies. The program equips its graduates with developmentally appropriate skills for supporting the development of the child's intellectual, communication, socio-emotional, physical, and personality domains.

Compelling current research in the field of child development and education emphasizes the importance of early investment in quality programming for young children and families. The recognition of critical periods has altered the landscape of best practices in early years and hence the required competencies for professionals serving young children and their families.

Concentrating on the ages 0-5 years provides students an opportunity to delve deeper into the growing plethora of interdisciplinary literature and resources available to the early childhood field. At the core of the major is the focus on quality services and programming for young children and families.

The ECS major utilizes a comprehensive approach to equipping students with knowledge in the foundation of child development and well-being, drawing from the fields of infant and early childhood mental health, interpersonal neurobiology, early childhood education, and early childhood special education. The major also aims to equip students with developmentally appropriate practices for nurturing curiosity and facilitating the development of creativity and appreciation of the arts in children.

In addition to a host of core early childhood studies courses and liberal education requirements, students either select a minor, or recommended interdisciplinary electives offered by the early childhood program or other disciplines in the university.

This program also offers a clearer path to graduate studies in related fields.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Admission Requirements (9 cr)
ECH 2010 - Foundational Issues in Early Childhood Studies (3.0 cr)
ECH 2015 - Literature for Young Children (3.0 cr)
ECH 2025 - Educating the Human Brain [SOC SCI] (3.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled

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including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
Requirements (50 - 51 cr)
- ASL 2001 - Beginning American Sign Language [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
- ECH 3050 - Observing Early Relationships in Infants and Toddlers (4.0 cr)
- ECH 3055 - Creative Expressions and Emergent Literacy: Birth - Age 8 (4.0 cr)
- ECH 3104 - Family Partnerships (1.0 cr)
- ECH 4009 - Leadership in Early Childhood Studies (3.0 cr)
- ECH 4010 - Infant and Early Childhood Perceptual and Psychomotor Development (2.0 cr)
- ECH 4400 - Professional Development Seminar (1.0 cr)
- EDUC 1100 - Human Diversity [LE CAT8, LECD CAT08, CDIVERSITY] (3.0 cr)
- ENED 4565 - Young Children, Nature, and Sustainability [SUSTAIN] (3.0 cr)
- HLTH 1470 - Human Nutrition [LE CAT5, NAT SCI] (3.0 cr)
- SPED 3103 - Infants and Toddlers with Special Needs (4.0 cr)
- SPED 3105 - Young Children with Special Needs: Ages Three-Eight (4.0 cr)
- SPED 3109 - Supporting Social/Emotional Development Birth-8 (3.0 cr)
- EDUC 3340 - Interacting with Diverse Families (3.0 cr)
  or SOC 1201 - Sociology of the Family [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
- EDUC 1000 - Human Development (3.0 cr)
  or PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)

Early Childhood field placement
- Expected 20 hours per week off campus internship in early childhood programs.
- Take 6 or more credit(s) from the following:
  - ECH 4600 - Student Teaching in Early Childhood/Primary (3.0 - 12.0 cr)

Advanced Writing (3 cr)
- WRIT 3140 - Advanced Writing: Human Services (3.0 cr)

Minor or Supporting Courses (34 - 35 cr)
A minor in African/African American studies or communication or deaf studies or environmental & outdoor educ or journalism or music or psychology or public health or sociology or theatre or women, gender & sexuality studies OR students may chose courses at the 3xxx, 4xxx or 5xxx level, in African/African American studies or communication or deaf studies or environmental & outdoor educ or journalism or music or psychology or public health or sociology or theatre or women, gender & sexual studies.

Minor and Supporting Courses
Early Childhood Studies Minor

Education

College of Education and Human Service Professions

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 23 to 25

Current research in the field of child development and education emphasizes the importance of early investment in quality programming for young children and families. The recognition of critical periods has altered the landscape of best practices and hence the required competencies for professionals from across disciplines who interface with young children and their families (e.g. social work, psychology, communication sciences and disorders, public health, nursing, occupational and physical therapy, medicine). In response, the Department of Education has designed a minor with an interdisciplinary curriculum. At the core of the minor is the focus on quality services and programming for young children and families.

Quality programming and service provision depends on highly trained professionals from across disciplines. A primary intent of the Early Childhood Minor is to foster the use of an interdisciplinary lens in preservice learners. Courses within the minor afford the opportunity for future professionals in human services related fields to think and work across disciplinary silos. The emphasis on interdisciplinary approaches harnesses the capacity across discipline-specific expertise and increases the likelihood of more seamless and efficient services delivered in future practice.

The Early Childhood Minor is intended to provide students with knowledge and skills designed to support scholarly and community-based work with children and their caregivers. A comprehensive approach to the foundation of child health and well being is integrated throughout coursework, drawing from fields of infant and early childhood mental health, and interpersonal neurobiology. Emphasis is placed on the integration and application of attachment theory, the neuro-relational underpinnings of development, and the role of reflective capacity in caregiving. Throughout the minor, participants examine aspects of early caregiver-child relationships, the impact of early adverse experiences on brain development, the role of the stress response system, and the importance of protective factors in changing long-term developmental outcomes. Specific course-related activities include infant/toddler observation, reflective supervision, and examination of evidence-based approaches to working with children and families at risk. Further, policy relevant to programs for young children and their families is highlighted and the role of "self" as child advocate is discussed. The research based early childhood curriculum is designed to support students who are preparing to work in areas that focus on children and families.

Program Delivery
This program is available:
- partially online (between 50% to 80% of instruction is online)

Admission Requirements
Students must complete 15 credits before admission to the program.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
Required Core (17 cr)

- ECH 2025 - Educating the Human Brain [SOC SCI] (3.0 cr)
- ECH 3050 - Observing Early Relationships in Infants and Toddlers (4.0 cr)
- EDUC 1000 - Human Development (3.0 cr)
- SPED 3103 - Infants and Toddlers with Special Needs (4.0 cr)
- SPED 3109 - Supporting Social/Emerotional Development Birth-8 (3.0 cr)

Electives (6 - 8 cr)
Must take courses from at least 2 designators.
Take 2 or more course(s) totaling 6 or more credit(s) from the following:

- CSD 3130 - Language Development and Disorders (4.0 cr)
- CSD 3131 - Language Development (4.0 cr)
- HLTH 1100 - Health and Wellness Strategies for Life [LE CAT8, SUSTAIN] (3.0 cr)
- HLTH 1470 - Human Nutrition [LE CAT5, NAT SCI] (3.0 cr)
- HLTH 3341 - Encountering Death and Grief: A Cross-Cultural Journey [CDIVERSITY] (3.0 cr)
- PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
• PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
• PSY 2023 - Marriages and Families Worldwide [LE CAT8, LEIP CAT08, GLOBAL PER] (4.0 cr)
• SW 1000 - Introduction to Social Welfare [SOC SCI] (3.0 cr)
• SW 1619 - Race, Class, and Gender in the United States [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
• SW 4113 - Introduction to Child Welfare Practice (3.0 cr)
Duluth Campus
Education Studies B.A.
Education
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 47 to 55
- Degree: Bachelor of Arts

The Education Studies degree gives students the knowledge and skills to work effectively with children and youth in positions that do not require state licensure/certification, an early opportunity to enter a teacher licensure/certification program at a later date, or a strong foundation for students interested in areas such as learning theory, educational psychology, child development, and education best practices in preparation for a variety of other occupations and career paths. The intended audience is for students no longer interested in pursuing a teaching license, but still interested in seeking careers with children and adolescents. The program does not lead to licensure; however, graduates will be prepared to work in non-profit agencies, youth centers, after-school programs and more.

It is designed for students already admitted to the UMD Education Blocks (junior/senior year) who have completed a majority of Block courses.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 90 credits before admission to the program.

Students must have been admitted to the teacher education program (blocks) to be eligible for admission into this program. Students must have completed 90 credits and have completed a minimum of 12 credits of the Education Core coursework.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register for 1 credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade
point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

Education Core (23 - 31 cr)
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)

Assessment
EDSE 4525 - Assessment for Secondary Education (3.0 cr)
or MU 3609 - Teaching Elementary Music II (2.0 cr)
or PETE 3500 - Student Assessment in Physical Education (3.0 cr)
or SPED 3205 - Foundations in Early Childhood Assessment (2.0 cr)
or SPED 4204 - Assessment in the General and Special Education Classroom (4.0 cr)

Diversity
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
or EDUC 1100 - Human Diversity [LE CAT8, LECD CAT08, CDIVERSITY] (3.0 cr)
or IESE 2001 - Diversity and Education Implications (3.0 cr)

Health/Drug Education
HLTH 3202 - Drug Education (2.0 cr)
OR HPER 3300 - Health and Physical Education in the Elementary School (3.0 cr)
OR SPED 3109 - Supporting Social/Emotional Development Birth-8 (3.0 cr)

Human Development
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
or EDUC 1000 - Human Development (3.0 cr)
or PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)

Literacy
ECH 2015 - Literature for Young Children (3.0 cr)
or EDUC 4347 - Second Language Acquisition & ELL: How Second Languages are Learned & Methods for Teaching (2.0 cr)
or IESE 3326 - Advanced Literacy & Language: Designing & Implementing a Comprehensive Literacy Program (2.0 cr)
or EDSE 4214 - Teaching Content-Area Reading (2.0 cr)

Special Education
PETE 3400 - Adapted Physical Education (3.0 cr)
or SPED 1357 - Individuals with Disabilities in Society [LE CAT8, LECD CAT08, CDIVERSITY] (3.0 cr)
or SPED 3415 - Special Education in the Secondary School (3.0 cr)
or SPED 4433 - Foundations in Special Education (4.0 cr)

Teaching Diversity
ECH 3060 - Teaching Culturally and Linguistically Diverse Children (3.0 cr)
or EDUC 3381 - Teaching American Indian Students in the Elementary Classroom (3.0 cr)
or EDUC 4381 - Teaching Indigenous Students (3.0 cr)

Technology
ART 3814 - Digital Media in Art Education (3.0 cr)
or EDUC 2000 - Technology for Teaching and Learning (3.0 cr)
or EDUC 3412 - The Computer in Education (4.0 cr)
or MU 3608 - Teaching Elementary Music I (2.0 cr)

Advanced Writing (3 cr)
WRIT 31xx Adv Writing (3 cr)

Program Sub-plans
Students are required to complete one of the following sub-plans.

Early Childhood and Early Childhood Special Education
This emphasis is will provide specialized background in working with children Birth-Age 6 in Early Childhood Special Education and Birth-Grade 3 in Early Childhood Education. This major is not eligible for teacher licensure.

Requirements (20 cr)
Take 20 or more credit(s) from the following:
• ECH 2xxx
• ECH 3xxx
• SPED 3xxx
Elementary and Special Education
This emphasis will provide specialized background in working with children K-Grade 6 in Elementary Education and K-Grade 12 in Special Education: Academic Behavioral Strategist. This major is not eligible for teacher licensure.

Requirements (20 cr)
Take 20 or more credit(s) from the following:
• IESE 1xxx
• IESE 2xxx
• IESE 3xxx
• IESE 4xxx
• SPED 4xxx

Secondary Education
This emphasis will provide specialized background in working with children in Grades K-12/Grades 5-12. This major is not eligible for teacher licensure.

Requirements (20 cr)
Take 20 or more credit(s) from the following:
• ANTH 1xxx
• ANTH 3xxx
• ART 1xxx
• ART 2xxx
• ART 3xxx
• ART 4xxx
• ARTH 1xxx
• ARTH 2xxx
• ARTH 3xxx
• ARTH 4xxx
• AST 1xxx
• BIOL 1xxx
• BIOL 2xxx
• BIOL 3xxx
• CHEM 1xxx
• CHEM 2xxx
• CHEM 3xxx
• COMM 1xxx
• ECON 1xxx
• ECON 2xxx
• ECON 3xxx
• ECON 4xxx
• EDSE 3xxx
• EDSE 4xxx
• EDUC 4234 - Science, Technology, and Society [SUSTAIN] (3.0 cr)
• ENGL 1xxx
• ENGL 2xxx
• ENGL 3xxx
• ENGL 4xxx
• ENGL 5xxx
• ESAT 2xxx
• ESAT 3xxx
• FR 1xxx
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Duluth Campus

Educational Computing and Technology Certificate
Education
College of Education and Human Service Professions

• Program Type: Undergraduate credit certificate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 15 to 16
• Degree: Certificate in Educational Computing/Technology

This certificate is designed for undergraduate or graduate students in any major or business professionals who are interested in expanding their knowledge and skills in educational computing and technology. The certificate provides basic-through-advanced training in computer hardware and software skills and other peripherals to include but not limited to iPads, iPad Apps, scanners, and Smartboards. Further, this certificate also provides instruction focused on reviewing and evaluating technology tools and allowing students to teach with those technology skills. In addition, the third course provides technology skill development with a focus on the administrative responsibilities. This would include such topics as: technology grant writing, the responsibilities of a technology committee, designing 21st century classrooms/facilities, and for designing professional development opportunities for colleagues and the greater community area. Finally, the certificate expands their technology skills in regard to teaching or delivering professional development training on-line and/or with hybrid coursework with a variety of different Learning Management Systems (LMS).

The program is designed for educational professionals, paraprofessionals, and those in the business world. Student projects are tailored to your personal interests and emphasize practical application for use in school classroom and/or business settings.

The certificate is at one of three levels: undergraduate, graduate, or noncredit; students must decide at what level they wish to pursue this program BEFORE enrolling in the first course as one cannot change ones level once initiated.

The certificate is not eligible for financial aid.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 60 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
• 2.50 already admitted to the degree-granting college
• 2.50 transferring from another University of Minnesota college
• 2.50 transferring from outside the University

Completed 60 semester credits, have an overall GPA of 2.5, and have satisfactorily completed at least two-thirds of the most recent 30 semester credits attempted.

If you have completed a bachelor's degree, you may choose to earn the certificate at the undergraduate level. Once admitted to the undergraduate certificate, you will not be allowed to change your undergraduate certificate credits to graduate certificate credits at a later time.

There are 2 forms involved with this certificate program:

Application for Admission Form: https://ibex.d.umn.edu/biz/onestop/cert_app_fee.html No fee is required if you are a registered UMD Student.

Completion Form: (Fill out and submit when you enroll in your last of the 4 courses.) http://www.d.umn.edu/onestop/university-studies/forms/certificate-completion.html

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an
undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

Required Courses

EDUC 2000 - Technology for Teaching and Learning (3.0 cr)
or EDUC 3412 - The Computer in Education (4.0 cr)
or EDUC 5412 - The Computer in Education (4.0 cr)
EDUC 5413 - Teaching With Technology (4.0 cr)
EDUC 5414 - Using Technology for the Administrative Tasks of Teaching (4.0 cr)
EDUC 5415 - Teaching Online and Hybrid Courses (4.0 cr)
Environmental and Outdoor Education B.A.Sc.

College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 86 to 87
- This program requires summer terms.
- Degree: Bachelor of Applied Science

The bachelor of applied science (B.A.Sc.) in environmental and outdoor education prepares students for professional careers in outdoor education allowing them to work in non-formal outdoor education settings such as nature centers, city, state, or national parks, college outdoor programs, or for commercial agencies. Core components include program planning and delivery, education methods, physical skills development, management, facilities coordination, evaluation, and principles of recreation. The recreation major is a four-year curriculum including one full semester of field placement in an outdoor educational setting.

This major provides professional training for nontraditional education settings that may not require a teaching license as a prerequisite credential. Refer to the environmental education emphasis under the teaching life science and/or teaching earth and space science majors for training that includes a teaching licensure.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Lower Division Core (24 - 25 cr)
ENED 1000 - Introduction to Environmental and Outdoor Education (4.0 cr)
ENED 1203 - Outdoor Skills I (2.0 cr)
ENED 1204 - Outdoor Skills II (2.0 cr)
ENED 2000 - Technology in Outdoor Education (3.0 cr)
ENED 2300 - Teaching and Learning (3.0 cr)

Biology
BIOL 1001 - Biology and Society [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
or BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)

Physical Education
Take 2 or more credit(s) from the following:
- PE 1500 - Cross-Country Skiing [PE] (1.0 cr)
- PE 1502 - Alpine Skiing [PE] (1.0 cr)
- PE 1507 - Introduction to River Kayaking [PE] (1.0 cr)
- PE 1508 - Flatwater Canoeing [PE] (1.0 cr)
- PE 1511 - Sea Kayaking (1.0 cr)
- PE 1512 - Fishing Skills [PE] (1.0 cr)
- PE 1530 - Rock Climbing [PE] (1.0 cr)
- PE 1531 - Intermediate Rock Climbing (1.0 cr)
• PE 2240 - Lifeguarding Today (1.0 cr)

Psychology

PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
or PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)

General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. Completion of all courses specified for the major with a minimum cumulative 2.00 GPA (including transfer work). No grades lower than C- in courses required for the major.

2. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

3. Skill Competency: Students who enroll in Physical Education Teaching Education (PETE) teaching skill courses must demonstrate advanced skills competencies for the course. Descriptions of skills required should be reviewed with the course instructor before enrollment.

4. We strongly encourage students to spend at least one term studying in an international setting. Our faculty provide direction to countries and sites worldwide to help best your professional goals and academic needs.

Upper Division Core (58 cr)

Exit standards: students must complete a full semester (12 credits) of field placement at a pre-approved site. A minimum of 600 contact hours must be completed. Students may complete their internship at a site located locally, nationally, or internationally. An overall GPA of 2.50 is required for enrollment.

ENED 3309 - Outdoor Leadership (1.0 cr)
ENED 3310 - Outdoor Leadership Field Experience (2.0 cr)
ENED 3330 - Outdoor Recreation (3.0 cr)
ENED 3341 - Field Interpretive Techniques I (3.0 cr)
ENED 3342 - Field Interpretive Techniques II (3.0 cr)
ENED 3400 - Program Development and Evaluation in Environmental and Outdoor Education (3.0 cr)
ENED 4163 - Outdoor Education Methods (3.0 cr)
ENED 4300 - Therapeutic Applications of Outdoor Education (3.0 cr)
ENED 4315 - Operations and Management (4.0 cr)
ENED 4320 - GIS Management for Recreation Professionals (3.0 cr)
ENED 4410 - Ropes Course Management (3.0 cr)
ENED 4555 - Foundations of Environmental Education (3.0 cr)
ENED 4565 - Young Children, Nature, and Sustainability [SUSTAIN] (3.0 cr)
ENED 4601 - Wilderness Philosophy (2.0 cr)
ENED 4996 - Outdoor Education Internship (12.0 cr)
HPER 3100 - Risk Management (2.0 cr)
PETE 3501 - Teaching Cross-Country Skiing (1.0 cr)
PETE 3505 - Teaching Outdoor Skills I (2.0 cr)
PETE 3507 - Teaching Outdoor Skills II (2.0 cr)

Advanced Writing Requirement (3 cr)
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or WRIT 3160 - Advanced Writing: Social Sciences (3.0 cr)
Environmental and Outdoor Education Minor

D Applied Human Sciences
College of Education and Human Service Professions

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 24
- This program requires summer terms.

The environmental and outdoor education minor familiarizes students with informal outdoor education settings.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major.

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Acceptance into this minor requires a minimum GPA of 2.50 plus application to the Department of Health, Physical Education, and Recreation (HPER).

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements

Lower Division Core (7 cr)
ENED 1000 - Introduction to Environmental and Outdoor Education (4.0 cr)
ENED 2300 - Teaching and Learning (3.0 cr)

Upper Division Core (17 cr)
ENED 3341 - Field Interpretive Techniques I (3.0 cr)
or ENED 3342 - Field Interpretive Techniques II (3.0 cr)
ENED 4163 - Outdoor Education Methods (3.0 cr)
PETE 3505 - Teaching Outdoor Skills I (2.0 cr)
or PETE 3507 - Teaching Outdoor Skills II (2.0 cr)
ENED 4997 - Recreation Practicum (3.0 cr)

Take 6 or more credit(s) from the following:
- ENED 3xxx
- ENED 4xxx
- ENED 5xxx
Duluth Campus

Exercise Science B.A.Sc.

College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 93 to 95
- Degree: Bachelor of Applied Science

The B.A.Sc. offers preparation for graduate school and a sound basis for professional training in the exercise and health sciences. The faculty in exercise science encourages students to develop as active scholars and to participate in undergraduate research. The B.A.Sc. degree is detailed and specific with a required concentration in either health fitness or exercise and sport science. Abilities in math, science, and critical thinking are required for matriculation and graduation.

Most upper level ESAT courses have a graded laboratory component. Students work under supervision in the Exercise Physiology Laboratory, Biomechanics Laboratory, and Motor Learning and Vision Laboratory. Students combine theoretical knowledge with practical experience in electrocardiography, exercise testing, exercise supervision, applied nutrition, and strength and conditioning procedures in a managed learning environment. They monitor and mentor students involved in exercise programs. Labs and other physical facilities allow learning via student research and activity. Substantial opportunities exist for interested students to conduct independent research under the guidance of faculty mentors. Such projects have potential to be presented at the local, state, and national professional meetings. This provides students with unparalleled opportunity for professional development and personal growth.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.

**UST 1000 - UMD Seminar (1.0 - 2.0 cr)**

Courses From Other Programs (37 - 38 cr)
First math course, chemistry course and biology course is determined by ACT math score. This program supposes placement directly in each required course.

- **BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)**
- **CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)**
- **CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)**
- **HLTH 1470 - Human Nutrition [LE CAT5, NAT SCI] (3.0 cr)**
- **HLTH 2030 - Applied Human Anatomy (4.0 cr)**
- **HLTH 2040 - Human Physiology (4.0 cr)**
- **PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)**
- **PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)**
- **WRIT 3150 - Advanced Writing: Science (3.0 cr)**
  - or **WRIT 3160 - Advanced Writing: Social Sciences (3.0 cr)**

**Math**
- **MATH 1250 - Precalculus Analysis [LE CAT2, LOGIC & QR] (4.0 cr)**
  - or **MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)**
  - or **MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)**

General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an
undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the **Liberal Education Program**.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

### Program Requirements

**ESAT Core Courses (37 cr)**

- **Required for all concentrations**
  - EXSC 3200 - Motor Learning and Development (5.0 cr)
  - EXSC 3210 - Exercise Adherence (3.0 cr)
  - EXSC 3300 - Human Biomechanics (4.0 cr)
  - EXSC 3400 - Exercise Physiology (4.0 cr)
  - EXSC 3410 - Performance Nutrition and Weight Management (4.0 cr)
  - EXSC 3420 - Exercise Testing and Prescription (4.0 cr)
  - EXSC 3430 - Principles of Strength and Conditioning Programs (4.0 cr)
  - EXSC 3440 - Clinical Exercise Physiology (5.0 cr)
  - EXSC 4700 - Statistics and Research Methods in Exercise Science (4.0 cr)

### Program Sub-plans

Students are required to complete one of the following sub-plans.

#### Exercise and Sport Science

The bachelor of applied science (B.A.Sc.) in exercise science with a concentration in exercise and sport science prepares students for admission to graduate programs in exercise science (biomechanics, exercise physiology, sports psychology), the health professions (including medicine, physician assistant, occupational and physical therapy), and clinically applied professions such as clinical exercise physiologist and cardiac rehabilitation. This area of study is primarily for students who intend to pursue advanced degrees in an exercise science specialization or to seek admission to a professional program in the health sciences.

The required curriculum includes a liberal education background, a core of basic and applied sciences, and courses in the exercise science sub-disciplines, and either a senior project or an internship in a sport, exercise, educational, or public service/workplace setting. This area of study is primarily for students who intend to pursue advanced degrees in an exercise science specialization or to seek admission to a professional program in the health sciences.

**Exercise and Sport Science Core Courses (4 cr)**

- EXSC 4710 - Applied and Experimental Exercise Science (4.0 cr)

**Courses From Other Programs (15 cr)**

- BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
- CHEM 1155 - General Chemistry II (4.0 cr)
- CHEM 1156 - General Chemistry Lab II (1.0 cr)
- PHYS 1002 - Introduction to Physics II (5.0 cr)

#### Health and Fitness

The bachelor of applied science (B.A.Sc.) in exercise science, with a concentration in health fitness, prepares students for professional involvement with clients in clinical, commercial, corporate, and service agency fitness and health programs. The curriculum prepares students to demonstrate the knowledge, skills, and abilities outlined by the American College of Sports Medicine (ACSM) for professionals in clinical and health-related programs. Completion of the degree program does not ensure ACSM certification.
Health and Fitness Core Courses (18 cr)
Students take ESAT 4996 for 6 credits.
EXSC 4996 - Internship (3.0 - 12.0 cr)
Electives (12 credits) any UMD 3xxx or higher course

Special Interest
The bachelor of applied science (B.A.Sc.) in exercise science special area of interest concentration prepares students for admission to unique graduate programs in exercise or related sciences that fall outside those prepared for with health and fitness and exercise sport science concentration curricula. Working in consultation with an exercise science faculty sponsor, the student submits a course plan and request to enroll in this concentration. The plan must include 19 or more credits of 3xxx or 4xxx courses and explain how each fits in the unique curricular goal. After departmental approval, the planned courses will comprise the student's concentration.

Special Area Courses (19 credits)
19 credits 3xxx or above, department approval required.
Duluth Campus
Individualized Integrated B.I.S.
College of Educ & Human Service Professions - Adm
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 65 to 66
- Degree: Bachelor of Individualized Studies

This major is designed to serve self-motivated students who have a desire to create an original major that captures their unique interests, experiences, and needs. Students work with faculty members and professional advisors to develop a plan of study that clearly connects two or more academic programs/disciplines.

The program serves new students who want to major in interdisciplinary areas for which majors are not available at UMD, current students who want to utilize existing UMD coursework to design their own interdisciplinary major, and transfer students from community colleges who wish to integrate previous coursework with coursework in CEHSP to design their own interdisciplinary major.

Students will prepare a proposal for an Individualized Interdisciplinary Major Program (IIMP) under the guidance of a professional advisor in the CEHSP Advising and Academic Service Office and one or more faculty advisor. The professional advisor will help the student to clarify their intended goals and to assist the student in identifying an appropriate faculty advisor. Both the professional advisor and the faculty advisor will assist the student during the development of the proposal. The proposal will include a plan of study that demonstrates the rationale for the outlined plan, describes the unity of the interdisciplinary areas to be studied, and outlines the integrative capstone project to be undertaken as the culminating project for the program. The capstone project will be reflective of the interdisciplinary nature of the program and could take the form of a research project or an applied project. A student is accepted for admission to the IIMP after the proposal is reviewed and approved by the IIMP Committee.

Each capstone project will be reviewed by the IIMP committee (IIMP). This committee will be comprised of one faculty member from each collegiate department and the designated academic advisor(s) so as to ensure that the IIMP program maintains its integrity of being a collegiate program.

Program Delivery
This program is available:
  - via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 30 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

Students enter as pre-majors and are admitted after their proposal outlining their course of study is approved. Students entering the major will be required to be in good academic standing (i.e. not on probation).

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two
degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. This major does not require a minor area of study.

Advanced Writing (3 cr)
- WRIT 3100 - Advanced Writing: Language and Literature (3.0 cr)
- WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)
- WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
- WRIT 3130 - Advanced Writing: Engineering (3.0 cr)
- WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
- WRIT 3150 - Advanced Writing: Science (3.0 cr)
- WRIT 3160 - Advanced Writing: Social Sciences (3.0 cr)

Statistics/Research Methods (3 - 4 cr)
- CSD 3010 - Introductory Statistics for the Behavioral Sciences (3.0 cr)
- EXSC 4700 - Statistics and Research Methods in Exercise Science (4.0 cr)
- PSY 2020 - Introduction to Statistics and Research Methods (3.0 cr)
- PSY 3020 - Statistical Methods (4.0 cr)
- STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)

Approved Program Electives (55 cr)
Content courses, as designed by the student in their proposal and approved by their advisor.

Capstone Course (3 cr)
Take 3 or more credit(s) from the following:
- EHS 4990 - Individualized Integrated Major Capstone Project (1.0 - 3.0 cr)
Duluth Campus
Integrated Elementary and Special Education B.A.Sc.
Education
College of Education and Human Service Professions

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 135
• Required credits within the major: 129
• This program is 9 terms (4½ years) long.
• This program requires summer terms.
• Degree: Bachelor of Applied Science

Successful completion of the B.A.Sc from the Integrated Elementary and Special Education (IESE) program qualifies students to apply for state licensure to teach K-6 elementary education and K-12 special education in the areas of learning disabilities, emotional behavior disorders, autism spectrum, developmental cognitive delay, and other health impairments within the mild to moderate range. This multi-categorical special education license is called Academic and Behavioral Strategist (ABS). The major also provides a good foundation for programs leading to licensure as an elementary principal or school counselor, employment in public and private schools, as well as correctional settings, human service agencies, hospital-based settings, and private practice.

An effective teacher should possess a broad background in liberal and professional education. This professional program focuses on the structure of the various disciplines: the child as learner, the learning environment, diverse learners, teaching strategies in practicum settings, and student teaching experience in both elementary and special education settings. All students complete a common core of courses in elementary and special education with emphasis in theory and teaching strategies in literacy and language arts, math, social studies, science, classroom and behavior management, assessment, and academic intervention.

Elementary and special education licensure requirements are established by the state of Minnesota and guided by national standards. Those requirements are changed periodically. For this reason, all IESE majors should maintain contact with their adviser as they advance through the program.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 48 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
• 2.70 already admitted to the degree-granting college
• 2.70 transferring from another University of Minnesota college
• 2.70 transferring from outside the University

Students entering the Integrated Elementary & Special Education license program are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/ieseapplication

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Lower Division Requirements (37 cr)
ART 2810 - Art in Elementary Education [LE CAT10, FINE ARTS] (3.0 cr)
CSD 2230 - Introduction to Human Communication Disorders [LE CAT8, LEC CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
ECH 2025 - Educating the Human Brain [SOC SCI] (3.0 cr)
EDUC 1000 - Human Development (3.0 cr)
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
IESE 1010 - Introduction to Inclusive Education (3.0 cr)
IESE 2001 - Diversity and Education Implications (3.0 cr)
MATH 1140 - Mathematics for Elementary Education I [LOGIC & QR] (3.0 cr)
MATH 1142 - Mathematics for Elementary Education II (3.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)

Geography Requirement
Students are encouraged to take GEOG 1202 or 1414 to fulfill geography and liberal education requirements.
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
• GEOG 1xxx
• GEOG 2xxx

History Requirement
Take 1 or more course(s) from the following:
• HIST 1304 - US History Part I: 1607-1877 [LE CAT7, HUMANITIES] (4.0 cr)
• HIST 1305 - US History Part II: 1865-Present [LE CAT7, HUMANITIES] (4.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Upper Division Requirement (19 cr)
EDUC 2000 - Technology for Teaching and Learning (3.0 cr)
HPER 3300 - Health and Physical Education in the Elementary School (3.0 cr)
IESE 3331 - Children's Literature in the Elementary School (3.0 cr)
MU 3600 - Music in the Elementary Classroom (3.0 cr)
SPED 4433 - Foundations in Special Education (4.0 cr)
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)

Block 1 (18 cr)
All courses must be taken concurrently.
IESE 3325 - Foundations of Literacy and Language (3.0 cr)
IESE 4366 - Teaching Elementary Social Studies I (3.0 cr)
SPED 4310 - Response to Intervention in the General Education Classroom (4.0 cr)
SPED 4381 - Classroom and Behavior Management (4.0 cr)
SPED 4435 - Parent and Professional Communication and Collaboration (4.0 cr)

Block 2 (17 cr)
All courses must be taken concurrently.
EDUC 4347 - Second Language Acquisition & ELL: How Second Languages are Learned & Methods for Teaching (2.0 cr)
IESE 3355 - Critical Thinking Elementary Mathematics Methods I (2.0 cr)
IESE 4344 - Teaching Science and Environmental Education I (3.0 cr)
IESE 4367 - Teaching Elementary Social Studies II (2.0 cr)
SPED 4204 - Assessment in the General and Special Education Classroom (4.0 cr)
SPED 4452 - Academic Interventions for Students with Disabilities (4.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website. Incompletes must be cleared before filing application. Students must have grades of C- or better in all required courses in the major to be eligible for student teaching.
EDUC 3381 - Teaching American Indian Students in the Elementary Classroom (3.0 cr)
IESE 3326 - Advanced Literacy & Language: Designing & Implementing a Comprehensive Literacy Program (2.0 cr)
IESE 3356 - Elementary Mathematics Methods II (3.0 cr)
IESE 4346 - Teaching Science & Environmental Education II (2.0 cr)
SPED 4585 - Individual Education Plans: Development and Implementation (3.0 cr)

Block 4 (12 cr)
ELED 4600 register for 12 credits. EDUC 4990 must be taken concurrently with ELED 4600.
ELED 4600 - Student Teaching (6.0 - 12.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)

Block 5 (12 cr)
All courses must be taken concurrently; SPED 4600 must be taken for 8 credits.
SPED 4455 - Transitional Planning for Adolescents with Disabilities (4.0 cr)
SPED 4600 - Student Teaching (1.0 - 12.0 cr)
**Duluth Campus**

**Physical Education B.A.Sc.**

*College of Education and Human Service Professions*

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 122 to 133
- Required credits within the major: 104 to 116
- Degree: Bachelor of Applied Science

The bachelor of applied science (B.A.Sc.) in physical education is for students preparing for teacher licensure in physical education (K-12). The major meets Minnesota Board of Teaching licensure requirements and standards of the Council for the Accreditation of Educator Preparation (CAEP) for teaching physical education in grades K-12 in Minnesota. The program is taught using the Learner-Sensitive Educator Model, supporting preferences of reflection, social justice, collaboration, empowerment, and technology.

Students are required to obtain personal liability insurance to protect them while they are working in public school situations. Proof of insurance also is required when enrolled in Physical Education Teacher Education (PETE) 4100, 4125, 4200, 4225, 4250, and student teaching. This usually is obtained most economically by student membership in the Minnesota Education Association. Applications are available in the department office.

The physical education program develops subject matter expertise of prospective teachers through a sequential set of courses. PETE courses are open only to majors, allowing faculty to focus on the specific needs and learning objectives of the physical education major.

The physical education program also instills an appropriate set of professional dispositions (attitudes and behaviors) that are predictors of success in educational settings. Students who fail to exhibit appropriate dispositions may be removed from the program.

**Program Delivery**

This program is available:
- via classroom (the majority of instruction is face-to-face)

**Admission Requirements**

Students must complete 44 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

**Required prerequisites**

**Introductory Course (1 cr)**

This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.

**UST 1000 - UMD Seminar (1.0 - 2.0 cr)**

**Lower Division (43 - 44 cr)**

- **EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)**
- **PETE 2400 - Applied Exercise Science (3.0 cr)**
- **HLTH 1100 - Health and Wellness Strategies for Life [LE CAT8, SUSTAIN] (3.0 cr)**
- **HLTH 1700 - First Responder (3.0 cr)**

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Information current as of October 02, 2018
PETE 1000 - Introduction and Foundations of Physical Education (4.0 cr)
PETE 1001 - Teaching Games and Activities (2.0 cr)
PETE 1002 - Teaching Team Sport Activities (2.0 cr)
PETE 1003 - Teaching Outdoor Activities in Physical Education (2.0 cr)
PETE 1004 - Teaching Recreational and Lifetime Activities (2.0 cr)
PETE 1005 - Teaching Physical Fitness Activities (2.0 cr)
PETE 1006 - Teaching Aquatic Activities (2.0 cr)
PETE 1007 - Teaching Dance Activities (2.0 cr)
PETE 1008 - Teaching Rhythmic Activities (2.0 cr)

PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)

BIOL 1001 - Biology and Society [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
or BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

2. For degree candidates at least 20 of the last 30 degree credits immediately before graduation must be taken at UMD.

Block Requirements:
Students must have completed (or be currently enrolled) in all lower division 1xxx PETE courses before applying to the Secondary Teacher Education Program (STEP). Application to the STEP program (due the 6th Friday of the semester) typically occurs in the fall semester of the junior year. Students need to have completed or be currently enrolled in PETE 3100, 3400, and 3500. Applications are available from the Department of Education website.

Upper Division (21 cr)
EDUC 3412 (register for 4 cr)
EDUC 3412 - The Computer in Education (4.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
PETE 3100 - Curricular Approaches in Physical Education (3.0 cr)
PETE 3200 - Developmental Movement: Concepts and Experiences (3.0 cr)
PETE 3400 - Adapted Physical Education (3.0 cr)
PETE 3500 - Student Assessment in Physical Education (3.0 cr)
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)

Block 1(13 cr)
All courses must be taken concurrently.
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
PETE 4250 - Supervised Teaching College I: Planning for Instruction (1.0 cr)
PETE 4100 - Elementary Physical Education Methods (4.0 cr)
  with PETE 4125 - Apprenticeship: Elementary (2.0 cr)

Block 2 (12 cr)
All courses must be taken concurrently. Students must apply for student teaching while enrolled in Block 2 courses. Applications must be submitted by the 4th Friday of the semester. Applications are available from Department of Education website. Block 2 is also the time to take the MTLE content area and pedagogy test. These tests are required for licensure in Minnesota.
EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)
PETE 4255 - Supervised Teaching College II: Implementation and Class Management (1.0 cr)
PETE 4200 - Secondary Physical Education Methods (4.0 cr)
  with PETE 4225 - Apprenticeship: Secondary (2.0 cr)

Block 3 (14 cr)
All courses must be taken concurrently. Registration for student teaching in the senior year requires grades of C- or better in all courses (except PETE 4600) in teaching major(s) and minor; graded completion of all education block courses and all PETE courses. Students must have personal liability insurance while they are working field placement settings. EDSE 4600 (register for 6 cr) ELED 4650 (register for 6 cr). EDUC 4990 must be taken concurrently with EDSE 4600.
EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)
ELED 4650 - Student Teaching in Individual Subjects: K-8 (1.0 - 6.0 cr)
PETE 4600 - Seminar in Physical Education (1.0 cr)

Program Sub-plans
A sub-plan is not required for this program.

Outdoor Education
The concentration in outdoor education is a series of courses that, in addition to the required courses for the physical education major, provide coursework to enable the student to incorporate outdoor educational skills into its curriculum. This concentration better prepares the physical education teacher for professional expectations.

Outdoor education courses (11 cr)

Required Courses (7 cr)
- ENED 4163 - Outdoor Education Methods (3.0 cr)
- PETE 3505 - Teaching Outdoor Skills I (2.0 cr)
- PETE 3507 - Teaching Outdoor Skills II (2.0 cr)

Electives (4 cr)
Take 4 or more credit(s) from the following:
- ENED 3309 - Outdoor Leadership (1.0 cr)
- ENED 3310 - Outdoor Leadership Field Experience (2.0 cr)
- ENED 4410 - Ropes Course Management (3.0 cr)
- PE 1500 - Cross-Country Skiing [PE] (1.0 cr)
- PE 1502 - Alpine Skiing [PE] (1.0 cr)
- PE 1507 - Introduction to River Kayaking [PE] (1.0 cr)
- PE 1508 - Flatwater Canoeing [PE] (1.0 cr)
- PE 1511 - Sea Kayaking (1.0 cr)
- PE 1512 - Fishing Skills [PE] (1.0 cr)
- PE 1530 - Rock Climbing [PE] (1.0 cr)
- PE 1531 - Intermediate Rock Climbing (1.0 cr)
- PETE 3501 - Teaching Cross-Country Skiing (1.0 cr)
- ENED 1201 - Outdoor Skills I [PE] (2.0 cr)
- ENED 1203 - Outdoor Skills I (2.0 cr)
Duluth Campus
Psychology B.A.Sc.

Psychology
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 56
- The online major is designed to extend UMD's outreach by targeting students who would have a difficult time re-locating in order to earn a bachelor's degree. Likewise, there is a potential collaboration with the UM Crookston campus to provide an opportunity for students currently enrolled at that campus to earn a psychology degree.
- Degree: Bachelor of Applied Science

The bachelor of applied science (B.A.Sc.) in psychology provides students with a firm grounding in the methods, history, and content areas of the discipline. Students are prepared for graduate study leading to advanced degrees in psychology or for paraprofessional positions requiring some application of research or human service delivery skills. The core curriculum covers the research methods used in the scientific study of behavior, and surveys theories, findings, and historical applications in a variety of psychology subfields. Students apply their methodology training to a topic of their choice in a faculty-supervised independent research project during the design and methodology courses of the core curriculum. In addition, the core curriculum requires some exposure to the main areas of the discipline. Students also have the opportunity to focus their study toward either graduate training or paraprofessional employment through their selection of elective courses (recommended as "tracks"), independent studies, or internships. Students should consult with faculty advisors to select appropriate elective courses to meet their career goals.

Students may qualify for department, college or University awards and scholarships. Please visit https://cehsp.d.umn.edu/students/scholarships. Students are encouraged to present their research findings at the Twin Ports Undergraduate Psychology Conference or the National Council for Undergraduate Research.

Distance Education - Many psychology courses are available online. An online major is available to students who have completed an associate degree or Minnesota Transfer Curriculum (MTC) or have verification of registration from a transfer institution where completing remaining credits for AA degree or MTC. The requirements for the online major are identical to those of the existing major but are structured to facilitate the delivery in the online medium. The online psychology major admits students every fall semester. Please call the Department of Psychology or visit the website at https://cehsp.d.umn.edu/departments-centers/psy for more information.

Honors Requirements: Senior students who have a minimum GPA of 3.80 within the psychology major and also have an overall GPA minimum of 3.00 may earn department psychology honors by doing one of the following: 1) complete an honors research project (PSY 3986) under the supervision of a psychology faculty member; 2) earn a grade of B or higher in a 5XXX-level psychology course; or 3) apply for and conduct a UROP (Undergraduate Research Opportunity Project) under the supervision of a psychology faculty member. Students must apply to the psychology department to be considered for departmental honors by the UMD deadline to apply for graduation in their final term. Students eligible for honors are urged to consult with their advisors or a psychology department faculty member on how they wish to pursue departmental honors before the end of their junior year.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)
- completely online (all program coursework can be completed online)

Admission Requirements
Students must complete 24 credits before admission to the program.

Freshmen students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students are admitted to UMD as pre—psychology majors. Pre—psychology majors who have an overall GPA of 2.50, a minimum of 24 completed credits, and have taken PSY 1003 - General Psychology or equivalent may declare psychology as a major by contacting the Psychology Department. Students with other declared majors who meet these requirements may declare psychology as a major by contacting the CEHSP Advising and Academic Services Office. Progress towards completion of degree requirements is continuously
tracked by the UMD Registrar's APAS system.

To apply for admission to the online major, graduates from partner community colleges must have a 2.50 GPA. It is best if students have already completed a course in general psychology. Admissions are for fall only.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

**Required prerequisites**

**Introductory Course (1 cr)**

This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for 1 credit.

**UST 1000 - UMD Seminar (1.0 - 2.0 cr)**

**General Requirements**

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled, including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the [Liberal Education Program](#).

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

**Program Requirements**

1. 20 credits of PSY 3xxx or higher applied to the B.A.Sc. must be taken in residence at UMD.

2. Degree candidates must complete at least 30 degree credits at UMD. At least 20 of the last 30 degree credits immediately before graduation must be taken at UMD.

3. A minor program or 18 additional 3xxx credits or higher outside the major.

4. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Student Advising & Academic Services Office early in their senior year.

5. Students are strongly encouraged to take advanced writing before taking PSY 3021.

6. Students are encouraged to select at least 1 personal experience that fosters engagement with psychology: active membership in Psi Chi & Psychology Club; peer advisors; becoming a research and/or teaching assistant in cooperation with a psychology faculty member; applying for a UROP or conducting research or a project through guided independent study PSY 3994, 3986, 3989. Students can have a supervised internship experience in an organization PSY 3011, prereq 3011.

7. To qualify for admission to the online program, students who have completed an AA degree or MN Transfer Curriculum or have verification of registration from transfer institution where completing remaining credits. Students are admitted every fall semester.

Study abroad: psychology students may elect to study abroad using the many opportunities UMD offers. Information is available at www.d.umn.edu/ieo.

**Core Requirements (35 - 41 cr)**
Core A
Note: PSY 3020 or 5052, 3021, 3022 must be completed in sequence. PSY 2003, 3020 are prereqs for PSY 3021.

PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
PSY 2003 - Psychology: Discipline and Profession (1.0 cr)
PSY 3021 - Experimental Design and Methodology (4.0 cr)
PSY 3022 - Applied Methods and Measurement (4.0 cr)
PSY 3081 - History and Systems of Psychology (3.0 cr)
BIOL 1001 - Biology and Society [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
or BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
PSY 3020 - Statistical Methods (4.0 cr)
or PSY 5052 - Advanced Statistics I (3.0 cr)

Core B
Take 2 or more course(s) from the following:
• PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
• PSY 3111 - Theories of Personality (3.0 cr)
• PSY 3121 - Abnormal Psychology (4.0 cr)
• PSY 3520 - Introduction to Industrial/Organizational Psychology (4.0 cr)
• PSY 3201 - Social Psychology (3.0 cr)
or PSY 5401 - Advanced Social Psychology (3.0 cr)

Core C
Take 2 or more course(s) from the following:
• PSY 3611 - Learning and Behavior (4.0 cr)
• PSY 3613 - Applied Behavior Analysis and Behavior Change (4.0 cr)
• PSY 3697 - Sensation and Perception (4.0 cr)
• PSY 3621 - Cognition (4.0 cr)
or PSY 5621 - Cognition and Emotion (3.0 cr)
• PSY 3613 - Applied Behavior Analysis and Behavior Change (4.0 cr)
or PSY 5631 - Biological Bases of Behavior (3.0 cr)

Electives (11 - 17 cr)
Combined with Core Requirements, students must take PSY 2xxx or higher to total 52 PSY credits. PSY 2020 cannot be used towards this requirement. Recommended electives for areas of interest from the following:
Take 11 - 17 credit(s) including 0 or more sub-requirements(s) from the following:

Clinical/Counseling
Take 0 or more course(s) from the following:
• PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
• PSY 3111 - Theories of Personality (3.0 cr)
• PSY 3121 - Abnormal Psychology (4.0 cr)
• PSY 3122 - Child and Adolescent Abnormal Psychology (3.0 cr)
• PSY 3201 - Social Psychology (3.0 cr)
• PSY 3524 - Basic Helping Skills (4.0 cr)
• PSY 3613 - Applied Behavior Analysis and Behavior Change (4.0 cr)
• PSY 4121 - Foundations of Clinical Psychology (3.0 cr)
• PSY 4500 - Health Psychology (3.0 cr)
• PSY 5120 - Career and Lifestyle Development (2.0 cr)
or PSY 5121 - Psychopathology Over the Lifespan (3.0 cr)

Developmental
Take 0 or more course(s) from the following:
• PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
• PSY 2023 - Marriages and Families Worldwide [LE CAT8, LEIP CAT08, GLOBAL PER] (4.0 cr)
• PSY 2223 - Gender in Society [LE CAT8, LECD CAT08, CDIVERSITY] (4.0 cr)
• PSY 3122 - Child and Adolescent Abnormal Psychology (3.0 cr)
• PSY 3215 - Topics in Human Sexuality (3.0 cr)
• PSY 3371 - Child and Adolescent Psychology (3.0 cr)
• PSY 3381 - Adult Development and Aging (3.0 cr)
• PSY 3661 - Psychology of Language (3.0 cr)
or PSY 5021 - Advanced Developmental Psychology (3.0 cr)

Experimental
Take 0 or more course(s) from the following:
• PSY 3061 - Physiological Psychology (4.0 cr)
• PSY 3201 - Social Psychology (3.0 cr)
• PSY 3231 - Psychology of Drug Use (3.0 cr)
• PSY 3613 - Applied Behavior Analysis and Behavior Change (4.0 cr)
or PSY 3621 - Cognition (4.0 cr)
or PSY 3661 - Psychology of Language (3.0 cr)
• PSY 3697 - Sensation and Perception (4.0 cr)
• PSY 5131 - Mind-Body Connection (3.0 cr)
• PSY 5155 - Forensic Psychology (3.0 cr)
• PSY 5401 - Advanced Social Psychology (3.0 cr)
• PSY 5621 - Cognition and Emotion (3.0 cr)
• PSY 5631 - Biological Bases of Behavior (3.0 cr)

• Human Services
  Take 0 or more course(s) from the following:
  • PSY 2023 - Marriages and Families Worldwide [LE CAT8, LEIP CAT08, GLOBAL PER] (4.0 cr)
  • PSY 3010 - Internship Preparation (2.0 cr)
  • PSY 3011 - Internship in Psychology (3.0 cr)
  • PSY 3211 - Group Dynamics (3.0 cr)
  • PSY 3524 - Basic Helping Skills (4.0 cr)
  • PSY 3601 - Psychology of Personal Development (3.0 cr)

• Industrial/Organizational
  Take 0 or more course(s) from the following:
  • PSY 3010 - Internship Preparation (2.0 cr)
  • PSY 3011 - Internship in Psychology (3.0 cr)
  • PSY 3520 - Introduction to Industrial/Organizational Psychology (4.0 cr)
  • PSY 3525 - Behavior Analysis in the Workplace (3.0 cr)
  • PSY 3701 - Personnel Psychology (3.0 cr)

• Organizational Psychology
  • PSY 3707 - Organizational Psychology (3.0 cr)
    or PSY 5702 - Advanced Organizational Psychology (3.0 cr)

• Personnel Psychology
  • PSY 3701 - Personnel Psychology (3.0 cr)
    or PSY 5701 - Advanced Personnel Psychology (3.0 cr)

Advanced Writing (3 cr).
Students are strongly encouraged to take advanced writing before taking PSY 3021.
  WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
  or WRIT 3160 - Advanced Writing: Social Sciences (3.0 cr)

Program Sub-plans
A sub-plan is not required for this program.

Online Psychology Major
B.A.Sc. psychology major (only) in an online format. The remaining credits can be taken at another institution, which allows for great flexibility.

1. An online major is available to students who have completed an associate degree or Minnesota Transfer Curriculum (MTC) or have verification of registration from transfer institution where completing remaining credits for AA degree or MTC and assumes 59 credits completed before starting the online major.

2. The requirements for the online major are identical to those of the existing major but are structured to facilitate the delivery in the online medium.

3. Students are admitted every fall semester. Please call the Department of Psychology or visit the website at www.d.umn.edu/psy/ for more information.

4. The research methods courses are considered to be the capstone experience for the program. The research methods courses require students to design and conduct a study.
Duluth Campus

Psychology Minor

College of Education and Human Service Professions

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 26

The undergraduate minor in psychology provides students with a basic survey of psychological theories, content areas, and methodology.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students with a cumulative GPA of 2.50 may declare a psychology minor at any time.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
Exit requirement: Minimum 2.00 (CEHSP requirement)

Psychology Minor Courses (7 - 8 cr)
- PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
- CSD 3010 - Introductory Statistics for the Behavioral Sciences (3.0 cr)
  or ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
  or EXSC 4700 - Statistics and Research Methods in Exercise Science (4.0 cr)
  or PSY 2020 - Introduction to Statistics and Research Methods (3.0 cr)
  or PSY 3020 - Statistical Methods (4.0 cr)
  or SOC 2155 - Introduction to Research Methods and Analysis (4.0 cr)
  or STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
  or Other comparable courses as approved by department.

Group I (3-4 cr)
Choose one course:
- PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
  or PSY 3081 - History and Systems of Psychology (3.0 cr)
  or PSY 3111 - Theories of Personality (3.0 cr)
  or PSY 3121 - Abnormal Psychology (4.0 cr)
  or PSY 3201 - Social Psychology (3.0 cr)

Group II (4 cr)
Choose one course:
- PSY 3061 - Physiological Psychology (4.0 cr)
  or PSY 3611 - Learning and Behavior (4.0 cr)
  or PSY 3613 - Applied Behavior Analysis and Behavior Change (4.0 cr)
  or PSY 3621 - Cognition (4.0 cr)
  or PSY 3697 - Sensation and Perception (4.0 cr)

Psychology Elective Courses (10-12 cr)
- PSY courses 2xxx or higher so total equals 26 credits

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Information current as of October 02, 2018
Duluth Campus
Public Health B.A.Sc.
D Applied Human Sciences
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 102 to 115
- Degree: Bachelor of Applied Science

The bachelor of applied science (B.A.Sc.) in public health prepares graduates for careers in public health departments, government health agencies, voluntary health organizations, hospitals, corporate worksites, universities, and K-12 schools. Upper division students select an area of concentration in either Community Health Education/Promotion or School Health Education. Students will develop a range of skills that include planning, implementing, administering, and evaluating evidence-based health interventions that promote health and prevent disease.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students are admitted to the program as pre-majors and must select a concentration. Community health education/promotion concentration students are admitted to upper division after completion of 45 credits, including HLTH 1100. School health education concentration students must apply to the Secondary Teacher Education Program (STEP) after completing 45 credits. Public health advisors assist students in course selection and application completion.

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. Selection of either community health education/promotion or school health education concentration/subplan.
2. Students majoring in public health are expected to maintain a 2.00 GPA overall and in the major (including transfer work). Students with school health education concentration must make no grade lower than C- in all courses required in the major.
3. At least 20 credits of HLTH 3xxx or higher applied to the BASc must be taken from UMD.
4. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.
5. Students are expected to: a) make satisfactory academic progress each semester; b) demonstrate acceptable professional performance in applied learning settings (e.g. laboratory, field experience, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experience.

Program Sub-plans

Students are required to complete one of the following sub-plans.

Community Health Education/Promotion
This concentration address the Seven Areas of Responsibility for Health Education Specialist (NCHEC, 2015): Area 1: Assess Needs, Resources and Capacity for Health Education/Promotion; Area 2: Plan Health Education/Promotion; Area 3: Implement Health Education/Promotion; Area 4: Conduct Evaluation and Research Related to Health Education/Promotion; Area 5: Administer and Manage Health Education/Promotion; Area 6: Serve as a Health Education/Promotion Resource Person; Area 7: Communicate, Promote, and Advocate for Health, Health Education/Promotion, and the Profession. Students completing this concentration are prepared to take the national Certified Health Education Specialist exam.

Exit Standards: Community Health Education/Promotion concentration students must maintain 2.0 or better GPA and pass all required courses for the major. The internship experience, which is typically completed during the senior year, provides students the opportunity for real-world hands-on experience with people and situations they may encounter as a beginning public health professional.

Students who declare this concentration will be considered pre-majors until they have completed 45 credits, including HLTH 1100 with a 2.5 or better cumulative GPA (including transfer work). When students have met this requirement, they must request admission to upper division/degree candidacy.

Required Lower Division Courses (19 - 20 cr)
HLTH 1100 - Health and Wellness Strategies for Life [LE CAT8, SUSTAIN] (3.0 cr)
HLTH 1470 - Human Nutrition [LE CAT5, NAT SCI] (3.0 cr)
HLTH 1700 - First Responder (3.0 cr)
HLTH 2030 - Applied Human Anatomy (4.0 cr)
HLTH 2040 - Human Physiology (4.0 cr)
Terminology
HLTH 1104 - Health Science Terminology (3.0 cr)
or PHAR 1002 - Medical Terminology (2.0 cr)

Required Courses From Other Programs (20 - 24 cr)
Biology

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Information current as of October 02, 2018
BIOL 1001 - Biology and Society [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
or BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)

Chemistry
CHEM 1104 is recommended for students seeking graduate education.
CHEM 1103 - Aspects of Chemistry [LE CAT5, NAT SCI, SUSTAIN] (3.0 cr)
or CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
or CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Communication
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)

Psychology
PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)

Statistics
If a STAT prefix course is not taken, a LE LOGIC is still required.
STAT 1411 - Introduction to Statistics [LE CAT2, LOGIC & QR] (3.0 cr)
or STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
or PSY 2020 - Introduction to Statistics and Research Methods (3.0 cr)
or PSY 3020 - Statistical Methods (4.0 cr)

Writing
WRIT 31xx Adv Writing (3.0 cr)

Upper Division Major Courses (18 - 19 cr)
HLTH 3000 - Program Administration in Public Health (3.0 cr)
HLTH 3115 - Consumer Health Education (3.0 cr)
HLTH 3301 - Foundations of Public Health (3.0 cr)
HLTH 3500 - Environmental Health (3.0 cr)
HLTH 3116 - Principles of Epidemiology and Human Disease (3.0 cr)
or PHAR 3501 - Introduction to Epidemiology (3.0 cr)
HLTH 3200 - Research and Evaluation in Health Science (3.0 cr)
or PSY 3020 - Statistical Methods (4.0 cr)

Community Health Education/Promotion Concentration Courses (30 - 36 cr)
A minimum of 9 credits of HLTH 4996 is required. Students can complete a maximum of 15 internship credits.
HLTH 3101 - Community Health (3.0 cr)
HLTH 3300 - Public Health Communication (4.0 cr)
HLTH 3303 - Planning Community Health Interventions (3.0 cr)
HLTH 3305 - Community Health Methods (4.0 cr)
HLTH 3400 - Facilitating Healthy Lifestyle Change (3.0 cr)
HLTH 4000 - The Health Education Specialist: Skills and Application (4.0 cr)
HLTH 4996 - Internship in Health Education (1.0 - 15.0 cr)

Health Content/Skills Requirement (8 - 9 cr)
Take 3 or more course(s) totaling 8 - 9 credit(s) from the following:
• HLTH 3118 - Women's Health Issues (3.0 cr)
• HLTH 3202 - Drug Education (2.0 cr)
• HLTH 3307 - Conducting and Managing Worksite Health Promotion Programs (3.0 cr)
• HLTH 3341 - Encountering Death and Grief: A Cross-Cultural Journey [CDIVERSITY] (3.0 cr)
• HLTH 4100 - Historical Perspectives of Community Health Through Culture & Art in Italy [GLOBAL PER] (3.0 cr)
• HLTH 3117 - Principles of Sex Education (3.0 cr)
or PSY 3215 - Topics in Human Sexuality (3.0 cr)

Elective Requirement (6 cr)
Not required for students with a minor.

Choose 3xxx or 4xxx courses in Public Health, HPER, Coaching, Communication, Exercise Science, Environmental & Outdoor Education, Environmental Studies, Health Care Management, Pharmacy, Psychology, Sociology, Social Work, or Women's Studies. The student's Public Health adviser may approve courses from other degree programs.

School Health Education
Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB).

Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

1. Personal Liability Insurance: All student teachers are required to have professional liability insurance. Application forms are available
in the Office of Field Experiences, Department of Education, 150 EduE.

2. Exit Standards: Candidate proficiency is assessed throughout the teacher preparation courses by University faculty, University supervisors, and the cooperating teachers in all field experiences. The field experience assessment forms include knowledge, skills, and dispositions that are aligned to institutional, state, and national standards for all field experiences.

3. Candidates must complete a semester of full-time student teaching in a public school setting at the middle or secondary level. Double majors (e.g., Physical Education and School Health Education) are required to student teach in both content areas. The final standards-based portfolio is due at the end of student teaching. Candidates must pass all required licensure tests before they can be recommended for teacher licensure in Minnesota.

**Required Lower Division Courses (20 cr)**
- HLTH 1100 - Health and Wellness Strategies for Life [LE CAT8, SUSTAIN] (3.0 cr)
- HLTH 1104 - Health Science Terminology (3.0 cr)
- HLTH 1470 - Human Nutrition [LE CAT5, NAT SCI] (3.0 cr)
- HLTH 1700 - First Responder (3.0 cr)
- HLTH 2030 - Applied Human Anatomy (4.0 cr)
- HLTH 2040 - Human Physiology (4.0 cr)

**Required Courses from Other Programs (17 - 20 cr)**
- Biology
  - BIOL 1001 - Biology and Society [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
  - or BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
- Chemistry
  - CHEM 1104 is optional
  - CHEM 1103 - Aspects of Chemistry [LE CAT5, NAT SCI, SUSTAIN] (3.0 cr)
  - or CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
  - or CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
  - CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
- Communication
  - COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
  - or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
- Psychology
  - PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
- Writing
  - WRIT 31xx Adv Writing (3.0 cr)

**Upper Division Major Courses (20 cr)**

Any other courses not aligned with standard need an APAS exception on file for school health concentration.

- HLTH 3000 - Program Administration in Public Health (3.0 cr)
- HLTH 3101 - Community Health (3.0 cr)
- HLTH 3117 - Principles of Sex Education (3.0 cr)
- HLTH 3200 - Research and Evaluation in Health Science (3.0 cr)
- HLTH 3202 - Drug Education (2.0 cr)
- HLTH 3301 - Foundations of Public Health (3.0 cr)
- HLTH 3115 - Consumer Health Education (3.0 cr)
  - or HLTH 3118 - Women's Health Issues (3.0 cr)

**School Health Concentration (45 cr)**
- EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
- EDUC 3412 - The Computer in Education (4.0 cr)
- HLTH 3302 - School Health Education Methods and Materials (3.0 cr)

**Block I (12 cr)**

All courses must be taken concurrently. Application for admission to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of Education website.

- EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
- EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
- EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
- SPED 3415 - Special Education in the Secondary School (3.0 cr)

**Block II (10 cr)**

All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website.

- EDUC 4381 - Teaching Indigenous Students (3.0 cr)
- EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
- EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
- EDSE 4525 - Assessment for Secondary Education (3.0 cr)

**Block III (13 cr)**

All courses must be taken concurrently. Registration for student teaching in the senior year requires grades of C- or better in all
courses in teaching major(s) and minor; graded completion of all education block courses; completion of at least 85% of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDSE 4600 (register for 12 cr). EDUC 4990 must be taken concurrently with EDSE 4600.

- **EDSE 4600** - Student Teaching (3.0 - 12.0 cr)
- **EDUC 4500** - Professional Issues and Ethics (1.0 cr)
- **EDUC 4990** - Education Teacher Performance Assessment (0.0 cr)
Duluth Campus

Public Health Minor

D Applied Human Sciences

College of Education and Human Service Professions

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 20 to 21

Students with other majors who have a strong interest in public health may choose to complete this minor. The coursework covers health content that would be applicable to various employment settings.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Admission into minor requires a minimum 2.5 cumulative GPA (including transfer work) and completion of lower division course work. Students already enrolled as majors in CEHSP will be given priority for admission to the public health minor. Contact the Department of Applied Human Sciences for more details.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements

At least 12 credits of HLTH courses applied to the minor must be taken from UMD.

Lower Division (6 cr)

- HLTH 1100 - Health and Wellness Strategies for Life [LE CAT8, SUSTAIN] (3.0 cr)
- HLTH 1470 - Human Nutrition [LE CAT5, NAT SCI] (3.0 cr)

Upper Division (9 cr)

Apply for admission to the upper division after completing the lower division courses, earning 45 credits, and having 2.50 GPA.

- HLTH 3116 - Principles of Epidemiology and Human Disease (3.0 cr)
- HLTH 3301 - Foundations of Public Health (3.0 cr)
- HLTH 3500 - Environmental Health (3.0 cr)

Health Content/Skills Requirement (5 - 6 cr)

Take 2 or more course(s) totaling 5 - 6 credit(s) from the following:

- HLTH 1700 - First Responder (3.0 cr)
- HLTH 3000 - Program Administration in Public Health (3.0 cr)
- HLTH 3101 - Community Health (3.0 cr)
- HLTH 3202 - Drug Education (2.0 cr)
- HLTH 3115 - Consumer Health Education (3.0 cr)
- HLTH 3118 - Women's Health Issues (3.0 cr)
- HLTH 3341 - Encountering Death and Grief: A Cross-Cultural Journey [CDIVERSITY] (3.0 cr)
- HLTH 3400 - Facilitating Healthy Lifestyle Change (3.0 cr)
- HLTH 4100 - Historical Perspectives of Community Health Through Culture & Art in Italy [GLOBAL PER] (3.0 cr)
- HLTH 3117 - Principles of Sex Education (3.0 cr)
  or PSY 3215 - Topics in Human Sexuality (3.0 cr)
- HLTH 3303 - Planning Community Health Interventions (3.0 cr)
  or HLTH 3307 - Conducting and Managing Worksite Health Promotion Programs (3.0 cr)
Duluth Campus
Social Work B.S.W.

College of Education and Human Service Professions

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 82 to 83
• Degree: Bachelor of Social Work

The bachelor of social work (BSW) program prepares students for generalist practice in a variety of human service settings. Graduates undertake a variety of professional social work roles ranging from counselor and case manager to community organizer and advocate. The curriculum has a special focus on services to American Indians and their communities.

Program Delivery
This program is available:
• partially online (between 50% to 80% of instruction is online)

Admission Requirements
Students must complete 30 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
• 2.50 already admitted to the degree-granting college
• 2.50 transferring from another University of Minnesota college
• 2.50 transferring from outside the University

Evidence of engagement in community service or volunteer work.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Admission Requirements (15 cr)
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
SOC 1101 - Introduction to Sociology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
SW 1000 - Introduction to Social Welfare [SOC SCI] (3.0 cr)
BIOL 1001 - Biology and Society [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
or PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through
courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

Required Core Courses (40 cr)

SW 4121 must be taken for 10 credits, 5 credits each semester.

SW 1619 - Race, Class, and Gender in the United States [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
SW 4100 - Anti-Oppressive Social Work Practice (3.0 cr)
SW 4101 - Human Behavior in Social Environment (3.0 cr)
SW 4102 - Introduction to Social Work Research (3.0 cr)
SW 4103 - Senior Capstone Project (2.0 cr)
SW 4111 - Introduction to Individual, Family and Group Practice (3.0 cr)
SW 4112 - Organization and Community Practice (3.0 cr)
SW 4120 - Community Volunteer Experience (1.0 cr)
SW 4121 - Senior Field Placement (5.0 cr)
SW 4190 - American Indian Social Work Practice Issues (3.0 cr)
SW 4201 - Social Welfare Policy (3.0 cr)
WRIT 31xx - Adv Writ (3 cr)

Statistics (3 - 4 cr)

ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
or PSY 2020 - Introduction to Statistics and Research Methods (3.0 cr)
or PSY 3020 - Statistical Methods (4.0 cr)
or SOC 2155 - Introduction to Research Methods and Analysis (4.0 cr)
or STAT 1411 - Introduction to Statistics [LE CAT2, LOGIC & QR] (3.0 cr)
or STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
or Other comparable as approved

Social Work Electives (12 cr)

Other classes may be used with permission of advisor.
Take 12 or more credit(s) from the following:

• SW 1210 - Global Issues [LE CAT8, LEIP CAT08, SOC SCI, GLOBAL PER] (3.0 cr)
• SW 4113 - Introduction to Child Welfare Practice (3.0 cr)
• SW 5091 - Independent Study (1.0 - 4.0 cr)
• SW 5095 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
• SW 5096 - Special Project (1.0 - 4.0 cr)
• SW 5111 - Grant Writing in the Human Services (1.0 - 2.0 cr)
• SW 4122 - Cross-Cultural Exploration Through Learning Circles (1.0 cr)
or SW 5120 - Cross-Cultural Exploration Through Learning Circles (1.0 cr)
• SW 4144 - Grief, Loss and Coping in Social Work Practice (2.0 cr)
or SW 5144 - Grief, Loss and Coping in Social Work Practice (2.0 cr)
• SW 4215 - Trauma Informed Practice with Children and Adolescents (2.0 cr)
or SW 5215 - Trauma Informed Social Work Practice with Children and Adolescents (2.0 cr)
• SW 4222 - Intervention in Family Violence (2.0 cr)
or SW 5222 - Intervention in Family Violence (2.0 cr)
• SW 4271 - Women and Social Policy (2.0 cr)
or SW 5271 - Women and Social Policy (2.0 cr)
• SW 4280 - Substance Use trends and Interventions in Social Work [SOC SCI] (3.0 cr)
or SW 5280 - Substance Use Trends and Interventions in Social Work (2.0 cr)

Non Social Work Electives (11 cr)

Other classes may be used with permission of advisor.
Take 11 or more credit(s) from the following:

• AAAS 1104 - Introduction to Black America [CDIVERSITY] (3.0 cr)
• AAAS 3201 - The African American Family (3.0 cr)
• AMIN 1001 - Introduction to American Indian Studies [CDIVERSITY] (3.0 cr)
• AMIN 1010 - American Indian Experience to 1900 [LE CAT7, LECD CAT07, CDIVERSITY] (3.0 cr)
• SOC 4925 - Sociology of Rape (3.0 cr)
• SOC 4935 - Peace Studies (3.0 cr)
• SOC 4947 - Sociology of Gender Identities and Systems (3.0 cr)
• SOC 4949 - Race and Ethnic Relations (3.0 cr)
• SOC 4981 - Social Movements, Protest and Change (4.0 cr)
• SOC 4982 - Political Sociology and the Global Economy (4.0 cr)
• SPED 1357 - Individuals with Disabilities in Society [LE CAT8, LECD CAT08, CDIVERSITY] (3.0 cr)
• SPED 3109 - Supporting Social/Emotional Development Birth-8 (3.0 cr)
• SPED 4250 - Foundations of Autism Spectrum Disorders (3.0 cr)
• WS 1000 - Introduction to Women's and Gender Studies [LE CAT7, LECD CAT07, CULT DIV, SOC SCI, CDIVERSITY] (3.0 cr)
• WS 2001 - Introduction to Lesbian Gay Bisexual and Transgender Studies [LE CAT8, LECD CAT08, CDIVERSITY] (4.0 cr)
• WS 2101 - Women, Race, and Class [LE CAT8, LECD CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3150 - Women-Identified Culture [CDIVERSITY] (3.0 cr)
• WS 3350 - Women and the Law [CDIVERSITY] (3.0 cr)
• WS 3450 - Motherhood and Mothering: Institution and Experience (3.0 cr)
• WS 3775 - Gender, Globalization and Food [SUSTAIN] (3.0 cr)
• WS 3800 - Feminist Activism and Community Organizing (4.0 cr)
Duluth Campus

Special Education Minor

Education

College of Education and Human Service Professions

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 20

Courses for the special education minor apply toward but do not complete K-12 special education licensure requirements. Remaining courses can be taken on a postbaccalaureate contract.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Special Education Minor Courses (20 cr)

- SPED 4204 - Assessment in the General and Special Education Classroom (4.0 cr)
- SPED 4381 - Classroom and Behavior Management (4.0 cr)
- SPED 4433 - Foundations in Special Education (4.0 cr)
- SPED 4435 - Parent and Professional Communication and Collaboration (4.0 cr)
- SPED 4452 - Academic Interventions for Students with Disabilities (4.0 cr)
Duluth Campus
Teaching Communication Arts and Literature B.A.A.

Education, English
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 98 to 99
- Degree: Bachelor of Applied Arts

The B.A.A. in teaching communication arts/literature is offered by the Department of Education in conjunction with the Department of English, Linguistics and Writing Studies and the Department of Communication. This program is required for students seeking teacher licensure as Minnesota Communication Arts/Literature teachers for grades 5 through 12.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Lower Division Requirements (20 cr)
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
ENGL 1582 - Introduction to World Literatures [LE CAT9, LEIP CAT09, HUMANITIES, GLOBAL PER] (4.0 cr)
ENGL 2906 - Methods of Literary Study (4.0 cr)
LING 1811 - Introduction to Linguistics [LE CAT2, LOGIC & QR] (3.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

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2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.
2. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Upper Division Requirements (36 - 37 cr)
Students must make satisfactory academic progress and demonstrate acceptable professional performance in field experiences. Students must have personal liability insurance while they are working in field placement settings.

EDUC 3412 - The Computer in Education (4.0 cr)
ENGL 4802 - English Language for Educators (4.0 cr)
ENGL 4902 - Teaching Language, Cognition, and Writing (4.0 cr)
HLTH 3202 - Drug Education (2.0 cr)

American Literature Survey
American Literature II, ENGL 3564, can be taken without having taken American Literature I, ENGL 3563.
ENGL 3563 - American Literature I [HUMANITIES, CDIVERSITY] (4.0 cr)
or
ENGL 3564 - American Literature II [HUMANITIES, CDIVERSITY] (4.0 cr)
or
ENGL 3573 - Survey of African American Literature [HUMANITIES, CDIVERSITY] (4.0 cr)

British Literature Survey
British Literature II, ENGL 3502, can be taken without having taken British Literature I, ENGL 3501.
ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
or
ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)

Early Period Literature
British Literature I, ENGL 3501 or American Literature I, ENGL 3563 can only fill this requirement if it is not fulfilling a survey requirement.
ENGL 3223 - Shakespeare [LE CAT9, HUMANITIES] (4.0 cr)
or
ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
or
ENGL 3563 - American Literature I [HUMANITIES, CDIVERSITY] (4.0 cr)
or
ENGL 5222 - Shakespeare (4.0 cr)
or
ENGL 5295 - Special Topics in Early Period Literature (Various Titles to be Assigned) (4.0 cr)
or
ENGL 5312 - Chaucer (4.0 cr)
or
ENGL 5533 - Studies in English Literature Before 1800 (4.0 cr)
or
ENGL 5541 - Restoration and 18th-Century Literature (4.0 cr)
or
ENGL 5572 - American Renaissance (4.0 cr)
or
ENGL 5574 - Studies in American Literature to 1914 (4.0 cr)
or
ENGL 5661 - Publishing the Middle Ages (4.0 cr)
or
ENGL 5662 - The Making of a Major Author: The Scholarly Edition in 17th- and 18th-Century England (4.0 cr)

Later Period Literature
British Literature II, ENGL 3502 or American Literature II, ENGL 3564 can only fill this requirement if it is not fulfilling a survey requirement.
ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
or ENGL 3564 - American Literature II [HUMANITIES, CDIVERSITY] (4.0 cr)
or ENGL 3574 - Reconstituting the Past in African Diaspora Literature (4.0 cr)
or ENGL 5395 - Special Topics in Late-Period Literature (various titles to be assigned) (4.0 cr)
or ENGL 5561 - English Romanticism (4.0 cr)
or ENGL 5562 - Victorian Literature (4.0 cr)
or ENGL 5564 - Studies in British Literature after 1900 (4.0 cr)
or ENGL 5575 - Studies in American Literature after 1914 (4.0 cr)
or ENGL 5584 - Mapping Postcolonial Literature (4.0 cr)
or ENGL 5663 - Readers and the History of Books (4.0 cr)
or ENGL 5665 - The American Literary Marketplace (4.0 cr)

Advanced Writing Requirement
WRIT 3100 - Advanced Writing: Language and Literature (3.0 cr)
or WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or ENGL 3115 - Writing Fiction (4.0 cr)
or ENGL 3121 - Writing Poetry (4.0 cr)

Advanced Literature Seminar
Upper division WRIT, LING, COMM course may be counted if relevant to licensure content area, but will not count toward the English major; consult advisor.
Take 3 or more credit(s) from the following:
• ENGL 4xxx
• ENGL 5xxx

Block Requirements (41 cr)
Application for admission to the blocks can only be completed fall semester for spring semester admission. Application for admission to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of Education website.

Block 1 (16 cr)
All courses must be taken concurrently. Consult advisor for additional upper division English courses.
EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 4215 - Teaching Reading and Literature: Grades 5-12 (4.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Block 2 (12 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website. Students majoring in English should also register for ENGL 4909 at this time.
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)
ENGL 4922 - Teaching Literature and Communication (4.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently. Registration for student teaching in the senior year requires grades of C- or better in all courses in teaching major(s) and minor; graded completion of all education block courses; completion of at least 85% of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. Students must register for EDSE 4600 for 12 credits. EDUC 4990 must be taken concurrently with EDSE 4600.
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)
Duluth Campus

Teaching Earth and Space Science B.A.Sc.

D Earth & Environmental Sci, Education

College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 132 to 163
- Required credits within the major: 114 to 146
- This program is 9 terms (4½ years) long.
- This program requires summer terms.
- Degree: Bachelor of Applied Science

The B.A.Sc. in teaching earth and space sciences is offered by the Department of Education in conjunction with the Department of Geological Sciences. This major is for students who plan to teach all science areas in grades 5 through 8 and teach earth and space sciences in grades 9 through 12.

Students have the option of also completing the environmental education emphasis with this major. This emphasis enhances the student's major by integrating environmental education into formal (pre-K-12), as well as nonformal education settings such as parks and nature centers. A student in this emphasis must meet the same GPA requirements as for the major. The emphasis is noted on the student's diploma.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major.

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.
2. Degree candidates must complete at least 20 of the last 30 degree credits immediately before graduation at UMD.
3. Students must make satisfactory academic progress and demonstrate acceptable professional performance in field experiences.
4. Program completers must pass all tests required by PELSB to be recommended for licensure.
5. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Lower Division Requirements (55 cr)
- AST 1040 - Introductory Astronomy [LE CAT5, NAT SCI] (3.0 cr)
- BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
- BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
- CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
- CHEM 1114 - Introduction to General, Organic, and Biological Chemistry II (5.0 cr)
- EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
- GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
- GEOL 1610 - Oceanography [LE CAT5, NAT SCI, SUSTAIN] (4.0 cr)
- GEOL 2110 - Earth History (4.0 cr)
- GEOL 2311 - Mineralogy (4.0 cr)
- MATH 1250 - Precalculus Analysis [LE CAT2, LOGIC & QR] (4.0 cr)
- PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
- PHYS 1002 - Introduction to Physics II (5.0 cr)

Upper Division (18 - 19 cr)
- EDUC 3412 - The Computer in Education (4.0 cr)
- EDUC 4234 - Science, Technology, and Society [SUSTAIN] (3.0 cr)
- GEOG 3401 - Weather and Climate (3.0 cr)
- HLTH 3202 - Drug Education (2.0 cr)
- GEOL 2120 - The Earth's Dynamic Interior (3.0 cr)
  - or GEOL 3210 - Geomorphology (4.0 cr)
- WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
  - or WRIT 3150 - Advanced Writing: Science (3.0 cr)

Block Requirements (40 cr)
Application for admission to the blocks can only be completed spring semester for fall semester admission. Application for admission to the blocks must be submitted by the sixth Friday of the semester. Applications are available from the Department of Education website.

Block I (12 cr)
All courses must be taken concurrently.
- EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
- EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
- EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Block 2 (15 cr)
All courses must be taken concurrently. Application for student teaching must be made by the fourth Friday of the semester before student teaching. Applications are available from Department of Education website. EDSE 4255 and GEOL 4110 offered spring only. Consult advisor for additional upper division science courses.

- EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
- EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
- EDSE 4255 - Teaching Science: Grades 5-12 (3.0 cr)
- EDSE 4525 - Assessment for Secondary Education (3.0 cr)
- EDUC 4381 - Teaching Indigenous Students (3.0 cr)
- EDUC 4110 - Advanced Earth Science for Teachers (2.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently. Registration for student teaching in the senior year requires grades of C- or better in all courses in teaching major(s) and minor. Graded completion of all education block courses; completion of at least 85% of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. Students must register for 12 credits in EDSE 4600.

- EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
- EDUC 4500 - Professional Issues and Ethics (1.0 cr)
- EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)

Program Sub-plans
A sub-plan is not required for this program.

Environmental Education
This emphasis enhances the student's major by integrating environmental education into formal (pre-K-12), as well as nonformal education settings such as parks and nature centers.

A student in this emphasis must meet the same GPA requirements as for the major. The emphasis is noted on the student's diploma.

Environmental Education Courses (25 cr)
- ENED 3309 - Outdoor Leadership (1.0 cr)
- ENED 3310 - Outdoor Leadership Field Experience (2.0 cr)
- ENED 3341 - Field Interpretive Techniques I (3.0 cr)
- ENED 3342 - Field Interpretive Techniques II (3.0 cr)
- ENED 4163 - Outdoor Education Methods (3.0 cr)
- HLTH 1650 - CPR/AED for the Professional Rescuer (1.0 cr)
- HLTH 1700 - First Responder (3.0 cr)
- PETE 3507 - Teaching Outdoor Skills II (2.0 cr)
- ENED 1203 - Outdoor Skills I (2.0 cr)
- ENED 1204 - Outdoor Skills II (2.0 cr)
- ENED 4997 - Recreation Practicum (3.0 cr)

Electives (6 cr)
Pre-approved natural science courses may be substituted. Take 6 or more credit(s) from the following:
- ES 2803 - Issues in Global Ecology [LE CAT5, LEIP CAT05, SUSTAIN] (3.0 cr)
- BIOL 3603 - Plant Taxonomy (3.0 cr)
- BIOL 4731 - Entomology (3.0 cr)
- BIOL 4761 - Ichthyology (3.0 cr)
- BIOL 4763 - Ornithology (3.0 cr)
- BIOL 5833 - Stream Ecology (3.0 cr)
- BIOL 5861 - Lake Ecology (3.0 cr)
- ENED 5325 - Sustainability Issues Investigation (2.0 cr)
- GEOL 5210 - Glacial and Quaternary Geology (4.0 cr)
Duluth Campus
Teaching French B.A.A.
Education, World Languages & Cultures
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 72 to 92
- Degree: Bachelor of Applied Arts

The BAA in teaching French is offered through the Department of Education, in conjunction with the Department of World Languages and Cultures. This major prepares students for licensure as a French teacher from kindergarten through grade 12.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Lower Division Requirements (3-23 cr)
Students may be exempted from part of the lower division requirements if they have previously completed French language coursework. The Dept. of World Languages and Cultures determines exemptions based on acceptance of transfer credits and work done in secondary school. Students with 3 years of high school French enter the sequence at the intermediate French level and are exempted from FR 1101-1102. Exemption does not necessarily carry credits towards the 120 credits needed for graduation.
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
FR 1101 - Beginning French I [LE CAT3, COMM & LAN] (4.0 cr)
FR 1102 - Beginning French II [LE CAT3, COMM & LAN] (4.0 cr)
FR 1201 - Intermediate French I [LE CAT3, COMM & LAN] (4.0 cr)
FR 1202 - Intermediate French II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
FR 2301 - Advanced French [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled
including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two
degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through
courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this
requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A
minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade
point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. For liberal education, it is recommended students take LING 1811 for the Logic and Quantitative Reasoning requirement.

2. Students must successfully complete an oral proficiency exam administered by the Department of World Languages and Cultures
before student teaching.

3. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the
CEHSP Advising & Academic Services Office early in their senior year.

4. Study abroad is essential for success in learning French.

5. Those that complete the program must pass all tests required by PELSB to be recommended for licensure.

6. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the
major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, and clinical
experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching
experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are
available from the department office.

Upper Division Requirements (29 cr)

Some of the upper division French courses may be transferred from another college or earned abroad, but at least two courses must
be taken at University of Minnesota, Duluth. By second semester, sophomore year, students start upper division requirements and
plan for application to the secondary teacher education program (STEP).

EDUC 3412 - The Computer in Education (4.0 cr)

HLTH 3202 - Drug Education (2.0 cr)

WRIT 3140 - Advanced Writing: Human Services (3.0 cr)

Must be completed prior to student teaching.

Take 20 or more credit(s) from the following:

• FR 2315 - French Cinema [LE CAT9, LEIP CAT09, HUMANITIES] (4.0 cr)
• FR 3302 - Advanced French Composition and Conversation [COMM & LAN] (4.0 cr)
• FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
• FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
• FR 4472 - French Classical Literature [HUMANITIES] (4.0 cr)
• FR 4492 - Modern French Literature (19th-21st century) [HUMANITIES] (4.0 cr)
• Any upper division FR courses may be taken with advisor approval prior to enrollment.

Block Requirements (39 cr)

Application for admission to the blocks is preferred to be completed spring semester for fall semester admission. Application for
admission to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of
Education.

Block 1 (12 cr)

All courses must be taken concurrently. Consult advisor for additional upper division French courses.

EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)
Block 2 (14 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website. Consult advisor for additional upper division French courses.
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
EDUC 4040 - World Language Teaching Methods (4.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently; EDSE 4600 register for 12 cr. Registration for student teaching in the senior year requires grades of C- or better in all courses in the teaching major(s)/minor(s); completion (graded) of all education block courses and oral proficiency exam, and at least 85% of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDUC 4990 must be taken concurrently with EDSE 4600.
EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)

Exit Standards
Students must successfully complete an oral proficiency exam administered by the Department of World Languages and Cultures before student teaching.
Duluth Campus
Teaching German B.A.A.
Education, World Languages & Cultures
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 72 to 92
- Degree: Bachelor of Applied Arts

The BAA in teaching German is offered through the Department of Education, in conjunction with the Department of World Languages and Cultures. This major prepares students to teach German from kindergarten through grade 12.

Note: Students pursing both the BA and BAA degrees in German must satisfactorily complete 12 non-overlapping upper division credits of German electives beyond the requirements for both degrees.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application: admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Lower Division Requirements (3-23 cr)
Students may be exempted from part of the lower division requirements if they have previously completed German language coursework. Dept of World Languages and Cultures determines exemptions based on acceptance of transfer credits and work done in secondary school. Students with 3 years of high school German enter sequence at the intermediate German level and are exempted from GER 1101-1102. Exemption does not necessarily carry credits towards the 120 credits needed for graduation.

EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
GER 1101 - Beginning German I [LE CAT3, COMM & LAN] (4.0 cr)
GER 1102 - Beginning German II [LE CAT3, COMM & LAN] (4.0 cr)
GER 1201 - Intermediate German I [LE CAT3, COMM & LAN] (4.0 cr)
GER 1202 - Intermediate German II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
GER 2301 - Advanced German [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

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Information current as of October 02, 2018
General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. It is recommended students take LING 1811 for Liberal Education Logic and Quantitative Reasoning.

2. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

3. Those who complete the program must pass all tests required by PELSB to be recommended for licensure.

4. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, and clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Upper Division Requirements (29 cr)

Some of the upper division German courses may be transferred from another college or earned abroad, but at least two courses must be taken at University of Minnesota, Duluth. By the second semester, sophomore year students start upper division major courses and plan for application to the secondary teacher education program (STEP).

EDUC 3412 - The Computer in Education (4.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)

Take 20 or more credit(s) from the following:

• GER 3302 - Advanced Composition and Conversation [COMM & LAN] (4.0 cr)
• GER 3401 - Texts and Contexts in German Speaking World [HUMANITIES] (4.0 cr)
• GER 3403 - Page and Stage: German Theater and Performance [FINE ARTS] (4.0 cr)
• GER 3601 - German Studies I: Knights to Nationalisms [HUMANITIES] (4.0 cr)
• GER 3602 - German Studies II: From the Rise of the Reich to the Fall of the Wall [HUMANITIES] (4.0 cr)
• GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
• GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
• GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
• GER 4502 - German Modernisms: From Vienna to Berlin [HUMANITIES] (4.0 cr)
• Any upper division GER courses may be taken with advisor approval prior to enrollment.

Block Requirements (39 cr)

Application for admission to the blocks is preferred to be completed spring semester for fall semester admission. Application for admission to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of Education website.

Block 1 (12 cr)

All courses must be taken concurrently. Consult advisor for additional upper division German course.

EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)

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Information current as of October 02, 2018
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Block 2 (14 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website. Consult advisor for additional upper division German course.
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)
EDUC 4040 - World Language Teaching Methods (4.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently; Registration for student teaching in the senior year requires: grades of C- or better in all courses in the teaching major(s) and minor(s); completion (graded) of all education block courses; completion of oral proficiency exam; and completion of at least 85 percent of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDSE 4600 register for 12 credits.
EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)

Oral Proficiency Exam
Students must successfully complete an oral proficiency exam administered by the Department of World Languages and Cultures before student teaching.
Duluth Campus
Teaching Life Science B.A.Sc.

College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 140 to 174
- Required credits within the major: 122 to 153
- This program is 9 terms (4½ years) long.
- This program requires summer terms.
- Degree: Bachelor of Applied Science

The B.A.Sc. degree in teaching life science is offered by the Department of Education in conjunction with the Department of Biology. This major prepares students to teach all science areas in grades 5-8 and to teach life science in grades 9 through 12.

Students have the option of also completing the environment education emphasis with this major.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through
courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this
requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A
minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade
point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the
CEHSP Advising & Academic Services Office early in their senior year.
2. Students must make satisfactory academic progress and demonstrate acceptable professional performance in field experiences.
3. Program completers must pass all tests required by PELSB to be recommended for licensure.
4. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the
major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical
experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching
experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are
available from the department office.

Lower Division Requirement (59 cr)
General Requirements (24 cr)
AST 1040 - Introductory Astronomy [LE CAT5, NAT SCI] (3.0 cr)
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
MATH 1250 - Precalculus Analysis [LE CAT2, LOGIC & QR] (4.0 cr)
PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
PHYS 1002 - Introduction to Physics II (5.0 cr)
Biology (25 cr)
BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
BIOL 2201 - Genetics (3.0 cr)
BIOL 3771 - Human Anatomy (4.0 cr)
BIOL 2801 - General Ecology (3.0 cr)
BIOL 2802 - Ecology Laboratory (2.0 cr)
Subgroup 0
BIOL 2110 - Cell and Molecular Biology (3.0 cr)
or BIOL 3100 - Cell Biology (3.0 cr)
Chemistry (10 cr)
CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
CHEM 1114 - Introduction to General, Organic, and Biological Chemistry II (5.0 cr)
Upper Division Requirements (22 cr)
BIOL 3703 - Animal Physiology (3.0 cr)
BIOL 3401 - Evolution [SUSTAIN] (3.0 cr)
EDUC 3412 - The Computer in Education (4.0 cr)
EDUC 4234 - Science, Technology, and Society [SUSTAIN] (3.0 cr)
GEOL 2110 - Earth History (4.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
Advanced Writing
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or WRIT 3150 - Advanced Writing: Science (3.0 cr)
Block Requirements (40 cr)
Application for admission to the blocks can only be completed spring semester for fall semester admission. Application for admission
to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of Education
website.
Block 1 (12 cr)
All courses must be taken concurrently. Consult advisor for additional upper division science course.
EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Block 2 (15 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website. EDSE 4255 and EDUC 4110 offered spring only. Consult advisor for additional upper division science course.
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
EDSE 4255 - Teaching Science: Grades 5-12 (3.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)
EDUC 4110 - Advanced Earth Science for Teachers (2.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently. Students must register for 12 cr in EDUC 4600. Registration for student teaching in the senior year requires: grades of C- or better in all courses in the teaching major(s) and minor(s); completion (graded) of all education block courses; and completion of at least 85 percent of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDUC 4990 must be taken concurrently with EDSE 4600.
EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)

Program Sub-plans
A sub-plan is not required for this program.

Environmental Education
Students may complete the environmental education emphasis with this major. The environmental education emphasis is offered by the Department of Education in conjunction with the Department of Biology and the Department of Health, Physical Education, and Recreation. This emphasis enhances the student's major by integrating environmental education into formal (pre-K-12), as well as nonformal education settings such as parks and nature centers. This emphasis must be taken in conjunction with the teaching life science or teaching earth and space science majors. The emphasis is noted on the student's diploma.

Students must complete 31 credits for the environmental education emphasis.

Requirements (25 cr)
ENED 3309 - Outdoor Leadership (1.0 cr)
ENED 3310 - Outdoor Leadership Field Experience (2.0 cr)
ENED 3341 - Field Interpretive Techniques I (3.0 cr)
ENED 3342 - Field Interpretive Techniques II (3.0 cr)
ENED 4163 - Outdoor Education Methods (3.0 cr)
HLTH 1650 - CPR/AED for the Professional Rescuer (1.0 cr)
HLTH 1700 - First Responder (3.0 cr)
PETE 3507 - Teaching Outdoor Skills II (2.0 cr)
ENED 1203 - Outdoor Skills I (2.0 cr)
ENED 1204 - Outdoor Skills II (2.0 cr)
ENED 4997 - Recreation Practicum (3.0 cr)

Electives (6 cr)
Pre-approved natural science courses may be substituted. Take 6 or more credit(s) from the following:
- BIOL 3603 - Plant Taxonomy (3.0 cr)
- BIOL 4731 - Entomology (3.0 cr)
- BIOL 4761 - Ichthyology (3.0 cr)
- BIOL 4763 - Ornithology (3.0 cr)
- BIOL 5833 - Stream Ecology (3.0 cr)
- BIOL 5861 - Lake Ecology (3.0 cr)
- ENED 5325 - Sustainability Issues Investigation (2.0 cr)
- ES 2803 - Issues in Global Ecology [LE CAT5, LEIP CAT05, SUSTAIN] (3.0 cr)
- GEOG 3401 - Weather and Climate (3.0 cr)
- GEOL 1610 - Oceanography [LE CAT5, NAT SCI, SUSTAIN] (3.0 cr)
- GEOL 8210 - Glacial and Quaternary Geology (4.0 cr)
Teaching Mathematics B.A.Sc.

College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 125
- Required credits within the major: 100
- Degree: Bachelor of Applied Science

The B.A.Sc. in teaching mathematics is offered by the Department of Education in conjunction with the Department of Mathematics and Statistics. This major is for students who plan to teach mathematics in grades 5-12.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Lower Division (18 cr)

Computer Science
CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)

Education
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)

Calculus I
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Calculus II
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two
degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.
2. Make satisfactory academic progress and demonstrate acceptable professional performance in field experiences.
3. Program completers must pass all tests required by PELSB to be recommended for licensure.
4. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Upper Division (42 cr)

EDUC 3412 - The Computer in Education (4.0 cr)
EDUC 4226 - Geometry for Teachers in Grades 5-8 (3.0 cr)
EDUC 4227 - Number Theory for Teachers in Grades 5-8 (3.0 cr)
EDUC 4228 - Teaching Mathematics with Technology (3.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
MATH 3110 - Foundations of Mathematics and Geometry (4.0 cr)
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
MATH 3355 - Discrete Mathematics (4.0 cr)
MATH 3941 - Undergraduate Colloquium (1.0 cr)
MATH 4201 - Elementary Real Analysis (4.0 cr)
MATH 4370 - Introduction to Abstract Algebra for Teaching Majors (3.0 cr)
STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Advanced Writing
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or WRIT 3150 - Advanced Writing: Science (3.0 cr)

Education Blocks (39 cr)
Application for admission to the blocks can only be completed fall semester for spring semester admission. Application for admission to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of Education website.

Block 1 (12 cr)
All courses must be taken concurrently. Consult advisor for additional upper division math course.
EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Block 2 (14 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website. Consult advisor for additional upper division math course.
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
EDSE 4222 - Teaching Mathematics: Grades 5-12 (4.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently. Students must take EDSE 4600 for 12 credits. Registration for student teaching in the senior year requires: grades of C- or better in all courses in the teaching major(s) and minor(s); completion (graded) of all education block courses; and completion of at least 85 percent of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDUC 4990 must be taken concurrently with EDSE 4600.

EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)
Duluth Campus
Teaching Physical Science B.A.Sc.
Chemistry and Biochemistry, Education, UMD-Physics & Astronomy
College of Education and Human Service Professions

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 136 to 140
• Required credits within the major: 118 to 122
• This program is 9 terms (4½ years) long.
• Degree: Bachelor of Applied Science

Students can choose to complete the chemistry emphasis or the physics emphasis.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
• 2.50 already admitted to the degree-granting college
• 2.50 transferring from another University of Minnesota college
• 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A
minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate. 

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

2. Students must make satisfactory academic progress and demonstrate acceptable professional performance in field experiences.

3. Students that complete the program must pass all tests required by PELSB to be recommended for licensure.

4. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Program Sub-plans

Students are required to complete one of the following sub-plans.

Chemistry
The BASc degree in teaching physical science, chemistry emphasis, is offered by the Department of Education in conjunction with the Department of Chemistry and Biochemistry. This major (116 - 117 cr) prepares students to teach all science areas in grades 5 through 8 and to teach chemistry in grades 9 through 12.

Lower Division Requirements (61 cr)

Astronomy
AST 1040 - Introductory Astronomy [LE CAT5, NAT SCI] (3.0 cr)

Biology
BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)

Chemistry
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
CHEM 1155 - General Chemistry II (4.0 cr)
CHEM 1156 - General Chemistry Lab II (1.0 cr)
CHEM 2222 - Quantitative Analysis (3.0 cr)
CHEM 2223 - Quantitative Analysis Laboratory (1.0 cr)
CHEM 2541 - Organic Chemistry I (3.0 cr)
CHEM 2542 - Organic Chemistry II (3.0 cr)
CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)
CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)

Education
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)

Geology
GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
GEOL 2110 - Earth History (4.0 cr)

Math
MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Physics
PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
PHYS 1002 - Introduction to Physics II (5.0 cr)

Upper Division Requirements (16 cr)

CHEM 3322 - Biochemistry (3.0 cr)
CHEM 3324 - Biochemistry Laboratory (1.0 cr)
EDUC 3412 - The Computer in Education (4.0 cr)
EDUC 4234 - Science, Technology, and Society [SUSTAIN] (3.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
Advanced Writing Requirement
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or WRIT 3150 - Advanced Writing: Science (3.0 cr)

Block Requirements (40 cr)
Application for admission to the blocks can only be completed spring semester for fall semester admission. Application for admission to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of Education website.

Block 1 (12 cr)
All courses must be taken concurrently. Consult advisor for additional upper division science course.
EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Block 2 (15 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Application are available from the Department of Education website. EDSE 4255 and EDUC 4110 offered spring only. Consult advisor for additional upper division science course.
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
EDSE 4255 - Teaching Science: Grades 5-12 (3.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)
EDUC 4110 - Advanced Earth Science for Teachers (2.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently. Registration for student teaching in the senior year requires grades of C- or better in all courses in teaching major(s) and minor; graded completion of all education block courses; completion of at least 85% of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDSE 4600 register for 12 credits. EDUC 4990 must be taken concurrently with EDSE 4600.
EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)

Physics
The BASc degree in teaching physical sciences, physics emphasis, is offered by the Department of Education in conjunction with the Department of Physics. This major (120 - 121 cr) prepares students to teach all science areas in grades 5 through 8 and to teach physics in grades 9 through 12. One semester of computer programming is recommended for students completing this major.

Lower Division Requirements (64 cr)
Astronomy
AST 1040 - Introductory Astronomy [LE CAT5, NAT SCI] (3.0 cr)

Biology
BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)

Chemistry
CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
CHEM 1114 - Introduction to General, Organic, and Biological Chemistry II (5.0 cr)

Education
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)

Geology
GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
GEOL 2110 - Earth History (4.0 cr)

Math
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Physics
Physics I
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Physics II
PHYS 2015 - General Physics II (4.0 cr)
or PHYS 2018 - Honors General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)

Additional Physics
PHYS 2021 - Relativity and Quantum Physics (4.0 cr)
PHYS 2022 - Classical Physics (4.0 cr)
PHYS 2033 - Classical and Quantum Physics Lab (2.0 cr)

Upper Division Requirements (17 cr)
EDUC 3412 - The Computer in Education (4.0 cr)
EDUC 4234 - Science, Technology, and Society [SUSTAIN] (3.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
PHYS 3061 - Instrumentation (3.0 cr)
PHYS 4110 - Physics for Science Teachers (2.0 cr)
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
or WRIT 3150 - Advanced Writing: Science (3.0 cr)

Block Requirements (40 cr)
Application for admission to the blocks must be submitted by the 6th Friday of the semester. Applications are available from the Department of Education website.

Block 1 (12 cr)
Application to the blocks can only be completed spring semester for fall semester admission. All courses must be taken concurrently.
Consult advisor for additional upper division science course.
EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Block 2 (15 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website. EDSE 4255 and EDUC 4110 offered spring only. Consult advisor for additional upper division science course.
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
EDSE 4255 - Teaching Science: Grades 5-12 (3.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)
EDUC 4110 - Advanced Earth Science for Teachers (2.0 cr)
EDSE 4525 - Assessment for Secondary Education (3.0 cr)

Block 3 (13 cr)
All courses must be taken concurrently. Registration for student teaching in the senior year requires grades of C- or better in all courses in the teaching major(s) and minor; graded completion of all education block courses; completion of at least 85% of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDSE 4600 register for 12 credits. EDUC 4990 must be taken concurrently with EDSE 4600.
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)
Duluth Campus
Teaching Social Studies B.A.A.
Education
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 123 to 129
- Required credits within the major: 110 to 112
- Degree: Bachelor of Applied Arts

The BAA in teaching social studies prepares students to teach grades 5 through 12. Social studies is an interdisciplinary major that requires lower division coursework in each of seven areas: anthropology, economics, geography, history, political science, psychology, and sociology. Students then select one of eight discipline areas as their sub-plan specialization and complete upper division course in that area: anthropology, economics, geography, history, political science, psychology, sociology or women's studies. Students complete professional preparation coursework in education.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students are usually admitted to pre-major status before admission to this major.

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ., consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Admissions Requirement (3 cr)
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

2. Degree candidates must complete at least 20 of the last 30 degree credits immediately before graduation at University of Minnesota, Duluth.

3. Make satisfactory academic progress and demonstrate acceptable professional performance in field experiences.

4. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Lower Division Requirements (36 cr)

**Anthropology**
- ANTH 1602 - Biological Anthropology and Archaeology [LE CAT7, LEIP CAT07, SOC SCI] (4.0 cr)
- or ANTH 1604 - Cultural Anthropology [LE CAT6, LEIP CAT06, SOC SCI, GLOBAL PER] (4.0 cr)

**Economics**
- ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
- or ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- or ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

**Geography**
- GEOG 1205 - Our Globalizing World [SOC SCI, GLOBAL PER] (3.0 cr)
- GEOG 1414 - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)

**History**
- HIST 1207 - Dawn of Modern Europe [LE CAT7, HUMANITIES] (4.0 cr)
- or HIST 1208 - Europe in the Modern Age [LE CAT7, HUMANITIES] (4.0 cr)
- HIST 1304 - US History Part I: 1607-1877 [LE CAT7, HUMANITIES] (4.0 cr)
- or HIST 1305 - US History Part II: 1865-Present [LE CAT7, HUMANITIES] (4.0 cr)

**Political Science**
- POL 1011 - American Government and Politics [LE CAT6, SOC SCI] (3.0 cr)
- or POL 1500 - Introduction to Comparative Politics [LE CAT6, LEIP CAT06, GLOBAL PER] (3.0 cr)
- or POL 1610 - Introduction to Political Theory [LE CAT7, HUMANITIES] (3.0 cr)

**Psychology**
- PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)

**Sociology**
- SOC 1101 - Introduction to Sociology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)

Upper Division Requirements (12 cr)

Students choosing to double major in History and Teaching Social Studies do not need advanced writing as this requirement is fulfilled through the History major.

**EDUC 3412** - The Computer in Education (4.0 cr)
**EDUC 4234** - Science, Technology, and Society [SUSTAIN] (3.0 cr)
**HLTH 3202** - Drug Education (2.0 cr)
**WRIT 3140** - Advanced Writing: Human Services (3.0 cr)
- or **WRIT 3160** - Advanced Writing: Social Sciences (3.0 cr)

Non-Western History Requirement (3 - 4 cr)
Non-Western History requirement is not required of teaching social studies majors with history sub plan or double major.

Take 1 or more course(s) totaling 3 or more credit(s) from the following:

- AMIN 2015 - Ojibwe History and Culture [SUSTAIN] (3.0 cr)
- HIST 1400 - Modern World History from 1500 to present [LE CAT7, LEIP CAT07, HUMANITIES, GLOBAL PER] (4.0 cr)
- HIST 2405 - History of Chinese Culture (4.0 cr)
- HIST 2410 - Modern China, Japan, Koreas, Vietnam and East Asia (4.0 cr)
- HIST 2515 - Ancient to Pre-Modern African History [LE CAT7, LECD CAT07, HUMANITIES] (4.0 cr)
- HIST 3463 - History of Modern China (4.0 cr)
- HIST 3465 - Twentieth Century China Politics (4.0 cr)
- HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
- HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
- POL 3570 - Politics of Developing Nations (3.0 cr)
- SPAN 2540 - Latino Literatures and Cultures [LE CAT8, LECD CAT08, HUMANITIES, CDIVERSITY] (4.0 cr)

**Block Requirements (38 cr)**

Application for admission to the blocks must be submitted by the 6th Friday of the spring semester. Applications are available from the Department of Education website. Application for admission must be completed spring semester for fall entry.

**Block 1 (12 cr)**

All courses must be taken concurrently.

- EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
- EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
- EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
- SPED 3415 - Special Education in the Secondary School (3.0 cr)

**Block 2 (13 cr)**

All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Department of Education website.

- EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
- EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
- EDSE 4244 - Teaching Social Studies: Grades 5-12 (3.0 cr)
- EDSE 4525 - Assessment for Secondary Education (3.0 cr)
- EDUC 4381 - Teaching Indigenous Students (3.0 cr)

**Block 3 (13 cr)**

All courses must be taken concurrently. Registration for student teaching in the senior year requires grades of C- or better in all courses in teaching major(s) and minor; graded completion of all education block courses; completion of at least 85% of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDSE 4600 - register for 12 credits. EDUC 4990 must be taken concurrently with EDSE 4600.

- EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
- EDUC 4500 - Professional Issues and Ethics (1.0 cr)
- EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)

**Program Sub-plans**

Students are required to complete one of the following sub-plans.

**Anthropology**

**Anthropology Sub-Plan (18 cr)**

Students who select this sub-plan must take both ANTH 1602 and 1604; one course will count under the lower division anthropology requirement and the other will count toward the sub-plan requirement.

- ANTH 1602 - Biological Anthropology and Archaeology [LE CAT7, LEIP CAT07, SOC SCI] (4.0 cr)
- or ANTH 1604 - Cultural Anthropology [LE CAT6, LEIP CAT06, SOC SCI, GLOBAL PER] (4.0 cr)
- SOC 3156 - Qualitative Research Methods and Analysis (4.0 cr)

Take 10 or more credit(s) from the following:

- ANTH 3xxx
- ANTH 4xxx

**Economics**

Students with an economics sub plan must take ECON 1003 as their lower division ECON course. ECON 1022 or ECON 1023 can count as a lower division course or count toward the sub plan. Students should select ECON 1022 or ECON 1023 as their lower division requirement and the other for the Economic sub plan requirement.

**Economics Sub-plan (18 cr)**

- ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

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Information current as of October 02, 2018
Statistics
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
  or PSY 3020 - Statistical Methods (4.0 cr)
  or SOC 3155 - Quantitative Research Methods and Analysis (4.0 cr)
  or STAT 1411 - Introduction to Statistics [LE CAT2, LOGIC & QR] (3.0 cr)
  or STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Upper Division
- ECON 3022 - Intermediate Macroeconomics (3.0 cr)
  or ECON 3023 - Intermediate Microeconomics (3.0 cr)
  or ECON 3402 - Global Economic Issues (3.0 cr)

ECON courses 3xxx or higher so total equals minimum 18 credits.
Take 5 or more credit(s) from the following:
  • ECON 3xxx
  • ECON 4xxx

Geography
Geography Sub-Plan (18 cr)
- ES 2005 - Environment and Sustainability [SUSTAIN] (3.0 cr)
- GIS 2552 - Mapping Our World [LOGIC & QR] (3.0 cr)

- ES or GEOG 1xxx - 2xxx
  GEOG 1205 and GEOG 1414 may not be applied.
  Take 6 or more credit(s) from the following:
    • ES 1xxx
    • ES 2xxx
    • GEOG 1xxx
    • GEOG 2xxx

Highly recommended courses include: ES 3100, GEOG 3401, GEOG 3411, GEOG 4393 and GEOG 4393.
Take 6 or more credit(s) from the following:
  • ES 3xxx
  • ES 4xxx
  • ES 5xxx
  • GEOG 3xxx
  • GEOG 4xxx
  • GEOG 5xxx

History
History Sub-plan (20 cr)
Take no more than 8 credits in any one sub-requirement group. Non-Western History requirement is not required for the History sub-plan or double major.

Other electives may be approved.
Take 20 or more credit(s) from the following:

Subrequirement I: United States History
Take 1 or more course(s) totaling 4 - 8 credit(s) from the following:
  • HIST 3310 - Colonial America: The American Revolution (4.0 cr)
  • HIST 3318 - Slavery, Lincoln and the Civil War (4.0 cr)
  • HIST 3320 - American Popular Culture, 1929 to the Present (4.0 cr)
  • HIST 3386 - The United States and the World since 1896 (4.0 cr)
  • HIST 3396 - The Vietnam War (4.0 cr)

Subrequirement II: European History
Take 1 or more course(s) totaling 4 - 8 credit(s) from the following:
  • HIST 2345 - Science and Society: 1500 to Present [LE CAT7, HUMANITIES] (4.0 cr)
  • HIST 3265 - The Soviet Experiment: Russia, the USSR, and Contemporary Russia [LE CAT7, LEIP CAT07, GLOBAL PER] (4.0 cr)
  • HIST 3133 - Ancient Greece from Homer to Alexander (4.0 cr)
  • HIST 3141 - Ancient Rome: From Republic to Empire (4.0 cr)
  • HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
  • HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
  • HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
  • HIST 3399 - Europe in the Age of Renaissance and Reformation: 1348-1648 (4.0 cr)
  • HIST 3940 - Early Modern England: 1485-1689 (4.0 cr)

Subrequirement III: Asian, African, Non-U.S., Non-European
Take 1 or more course(s) totaling 4 - 8 credit(s) from the following:
  • HIST 2325 - Muslim Societies [LE CAT7, LEIP CAT07] (4.0 cr)
  • HIST 2405 - History of Chinese Culture (4.0 cr)
  • HIST 2410 - Modern China, Japan, Koreas, Vietnam and East Asia (4.0 cr)
•HIST 2515 - Ancient to Pre-Modern African History [LE CAT7, LECD CAT07, HUMANITIES] (4.0 cr)
•HIST 3035 - Ancient Warfare From Alexander to Mohammad (4.0 cr)
•HIST 3055 - The Bible & Ancient Near East (4.0 cr)
•HIST 3463 - History of Modern China (4.0 cr)
•HIST 3465 - Twentieth Century China Politics (4.0 cr)
•HIST 3615 - Modern Africa (4.0 cr)
•HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
•HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
•HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
•HIST 4727 - Middle Eastern History Through Film [LEIP CAT07] (4.0 cr)

Special Topics
A Special Topics course may fulfill a category requirement; advisor prior approval for intended category required.
Take 0 - 2 course(s) from the following:
•HIST 3095 - Special Topics: (Various Titles to be Assigned) (3.0 cr)

Political Science
Political Science Sub-Plan (18 cr)
Take 18 or more course(s) from the following:

Category I: United States Politics
Take 1 or more course(s) from the following:
• POL 3001 - American Public Policy (3.0 cr)
• POL 3015 - State and Local Government (4.0 cr)
• POL 3040 - Women and Politics (3.0 cr)
• POL 3080 - Environment and Politics (3.0 cr)
• POL 3120 - Congress and the Presidency (4.0 cr)
• POL 3150 - American Constitutional Law I (3.0 cr)
• POL 3151 - American Constitutional Law II (3.0 cr)
• POL 3170 - Political Interest Groups and Individuals (3.0 cr)

Category II: International Politics
Take 1 or more course(s) from the following:
• POL 3400 - Contemporary Issues in World Politics (4.0 cr)
• POL 3403 - American Foreign Policy (3.0 cr)
• POL 3420 - International Organization and Global Governance (3.0 cr)

Category III: Comparative Politics
Take 1 or more course(s) from the following:
• POL 3511 - Politics of South Asia (4.0 cr)
• POL 3515 - Theories of Comparative Politics (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3518 - Transitional Politics of Asia (3.0 cr)
• POL 3525 - African Politics (3.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• POL 3580 - Central American Politics (4.0 cr)

Category IV: Political Theory
Take 1 or more course(s) from the following:
• POL 3600 - Political Concepts (4.0 cr)
• POL 3610 - Political Economy: An Introduction (3.0 cr)
• POL 3651 - Classical Political Thought (4.0 cr)
• POL 3652 - Modern Political Thought (4.0 cr)

Psychology
Psychology Sub-Plan (18 cr)
Students who select the psychology sub plan follow the guidelines for the psychology minor. EDSE 4501 credits count as an elective course in the psychology minor. Students who select the psychology sub plan should register with the psychology department as a psychology minor.
Take 18 or more credit(s) from the following:

Psychology minor course
• CSD 3010 - Introductory Statistics for the Behavioral Sciences (3.0 cr)
or ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
or EXSC 4700 - Statistics and Research Methods in Exercise Science (4.0 cr)
or PSY 2020 - Introduction to Statistics and Research Methods (3.0 cr)
or PSY 3020 - Statistical Methods (4.0 cr)
or SOC 2155 - Introduction to Research Methods and Analysis (4.0 cr)
or STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
or Other approved course

-Group I
• PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
or PSY 3081 - History and Systems of Psychology (3.0 cr)
or PSY 3111 - Theories of Personality (3.0 cr)
or PSY 3121 - Abnormal Psychology (4.0 cr)
or PSY 3201 - Social Psychology (3.0 cr)

• Group II
• PSY 3061 - Physiological Psychology (4.0 cr)
or PSY 3611 - Learning and Behavior (4.0 cr)
or PSY 3613 - Applied Behavior Analysis and Behavior Change (4.0 cr)
or PSY 3621 - Cognition (4.0 cr)
or PSY 3697 - Sensation and Perception (4.0 cr)

• Psychology Elective Courses
PSY courses 2xxx or higher so total equals minimum 18 credits.
Take 8 or more credit(s) from the following:
• PSY 2xxx
• PSY 3xxx
• PSY 4xxx
• EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)

Sociology
Sociology Sub-Plan (18 cr)
SOC 2155 - Introduction to Research Methods and Analysis (4.0 cr)
SOC 3945 - Social Stratification (3.0 cr)
SOC 4111 - Sociological Theory (4.0 cr)
Take 7 or more credit(s) from the following:
• SOC 3xxx
• SOC 4xxx

Women's Studies
Women's Studies Sub-Plan (18 cr)
WS 2001 - Introduction to Lesbian Gay Bisexual and Transgender Studies [LE CAT8, LECD CAT08, CDIVERSITY] (4.0 cr)

Electives (14 cr)
Take 14 or more credit(s) from the following:
Women's Studies
Take 6 or more credit(s) from the following:
• WS 3xxx
• WS 4xxx

Women's Studies Related Courses
Take 6 or more credit(s) from the following:
• AMIN 3450 - American Indian Women [CDIVERSITY] (3.0 cr)
• ANTH 3080 - Cultural Constructions of the Body (4.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• CRIM 4323 - Women and Justice (3.0 cr)
• ENGL 2581 - Women Writers [LE CAT9, LECD CAT09, HUMANITIES] (4.0 cr)
• HLTH 3118 - Women's Health Issues (3.0 cr)
• LGBT 3xxx
• LGBT 4xxx
• POL 3040 - Women and Politics (3.0 cr)
• PSY 2223 - Gender in Society [LE CAT8, LECD CAT08, CDIVERSITY] (4.0 cr)
• PSY 3215 - Topics in Human Sexuality (3.0 cr)
• SOC 4925 - Sociology of Rape (3.0 cr)
• SOC 4947 - Sociology of Gender Identities and Systems (3.0 cr)
Duluth Campus
Teaching Spanish B.A.A.
Education, World Languages & Cultures
College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 72 to 92
- Degree: Bachelor of Applied Arts

The BAA in teaching Spanish is offered through the Department of Education, in conjunction with the Department of World Languages and Cultures.

This major prepares students to teach Spanish from kindergarten through grade twelve.

Students pursuing both the BA and BAA degrees in Hispanic Studies or Latin American Area Studies must satisfactorily complete 12 non-overlapping upper division credits of Spanish electives beyond the requirements for both degrees.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.
Register course for one credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Lower Division Requirements (3 - 23 cr)
Students may be exempted from part of the core requirements if they have previously completed Spanish language coursework. The Dept of World Languages and Cultures determines exemptions based on acceptance of transfer credits and work done in secondary school. Students with three years of high school Spanish enter the sequence at the intermediate Spanish level and are exempted from SPAN 1101-1102. Exemption does not necessarily carry credits toward the 120 credits needed for graduation
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
SPAN 1101 - Beginning Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
SPAN 1102 - Beginning Spanish II [LE CAT3, COMM & LAN] (4.0 cr)
SPAN 1201 - Intermediate Spanish I [LE CAT3, COMM & LAN] (4.0 cr)
SPAN 1202 - Intermediate Spanish II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
SPAN 2301 - Advanced Spanish [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. It is recommended students take LING 1811 for liberal education Logic and Quantitative Reasoning.
2. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.
3. Study abroad is essential for success in learning Spanish.
4. Program completers must pass all tests required by PELSB to be recommended for licensure.
5. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); and c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Upper Division Requirements (29 cr)
Some of the upper division Spanish courses may be transferred from another college or earned abroad, but at least two courses must be taken at University of Minnesota, Duluth. By the second semester of the sophomore year, students start upper division major courses and plan for application to the secondary teacher education program (STEP). EDUC 3412 register for 4 credits.
EDUC 3412 - The Computer in Education (4.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
Take 20 or more credit(s) from the following:
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4013 - Hispanic American Poetry and Drama [HUMANITIES] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4022 - Medieval and Golden Age Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• SPAN 4090 - Aspects of the Hispanic World [HUMANITIES] (4.0 cr)
• Any upper division SPAN courses may be taken with advisor approval prior to enrollment.

Student Teaching
Registration for student teaching in the senior year requires: grades of C- or better in all courses in the teaching major(s) and minor(s); completion (graded) of all education block courses, including EDUC 4040; completion of at least 85 percent of teaching major courses; having passed the oral proficiency exam and permission from faculty in the foreign languages program.
Must have personal liability insurance while working in field placement settings.

**Block Requirements (39 cr)**

Application for admission to the blocks is preferred to be completed spring semester for fall semester admission. Application for admission to the blocks must be submitted by the sixth Friday of the semester. Applications are available from the Department of Education website.

**Block 1 (12 cr)**

All courses must be taken concurrently. Consult advisor for additional upper division Spanish course.

- EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
- EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
- EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
- SPED 3415 - Special Education in the Secondary School (3.0 cr)

**Block 2 (14 cr)**

All courses must be taken concurrently. Application for student teaching must be made by the fourth Friday of the semester before student teaching. Applications are available from the Department of Education website. Consult advisor for additional upper division Spanish course. Oral Proficiency Exam must be completed prior to student teaching.

- EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
- EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
- EDSE 4525 - Assessment for Secondary Education (3.0 cr)
- EDUC 4381 - Teaching Indigenous Students (3.0 cr)
- EDUC 4040 - World Language Teaching Methods (4.0 cr)

**Block 3 (13 cr)**

All courses must be taken concurrently. Registration for student teaching in the senior year requires; grades of C- or better in all courses in the teaching major(s) and minor(s); completion (graded) of all education block courses; completion of oral proficiency exam, and completion of at least 85 percent of teaching major courses. Students must have personal liability insurance while they are working in field placement settings. EDUC 4990 must be taken concurrently with EDSE 4600.

- EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
- EDUC 4500 - Professional Issues and Ethics (1.0 cr)
- EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)

**Exit Standards**

Students must successfully complete an oral proficiency exam administered by the Department of World Languages and Cultures before student teaching.
Duluth Campus
Unified Early Childhood Studies B.A.Sc.

College of Education and Human Service Professions

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 130 to 131
- Required credits within the major: 105 to 106
- Mesabi Range Community and Technical College, Virginia, MN. A collaboration between MRCTC and UMD resulted in the creation of several lower division courses at Mesabi designed to meet identified licensure standards and to transfer to UMD. Students interested in early childhood licensure were advised to take these courses as electives in the MRCTC's Associate of Arts curriculum. These students are now eligible to apply for admission to the UMD licensure program. The intent of the plan for off-site delivery was to provide a program in the communities in which the students lived, where they wanted to eventually work, and where the early childhood teachers are needed. The courses would be partially internet delivered to provide flexibility in the delivery of the program, and to ease access constraints for students who would commute from Iron Range communities other than Virginia. The combined face-to-face and online model limits enrollment to UMD's traditional service region.

Degree: Bachelor of Applied Science

The unified early childhood studies program and licensures include interdisciplinary curricula that prepare students for work in a variety of settings with children of diverse ability levels, from birth through age eight.

Graduates find employment in public schools, community and private preschool programs, early primary grades in elementary schools, programs for children ages birth through six with identified disabilities or delays, home and center-based child care, and Head Start programs.

All students complete a common core of courses in child development, parent-child relations, early childhood curriculum and programming, early childhood special education, community resources, and educational leadership and program administration.

The unified early childhood studies major leads to Minnesota licensure in early childhood education (birth through grade three) and early childhood special education. International student teaching placements are available.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 54 credits before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.70 already admitted to the degree-granting college
- 2.70 transferring from another University of Minnesota college
- 2.70 transferring from outside the University

Students entering the Unified Early Childhood Studies license program are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/uechapplication

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Introductory Course (1 cr)
This course will be waived for transfer students with 24 credits taken post high school or students who change to CEHSP from a collegiate unit where it is not required.

Register course for one credit.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)
Lower Division (21 - 22 cr)

- ECH 2010 - Foundational Issues in Early Childhood Studies (3.0 cr)
- ECH 2015 - Literature for Young Children (3.0 cr)
- ECH 2025 - Educating the Human Brain [SOC SCI] (3.0 cr)
- EDUC 1100 - Human Diversity [LE CAT8, LECED CAT08, CDIVERSITY] (3.0 cr)
- EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
- EDUC 1000 - Human Development (3.0 cr)
- or PSY 2021 - Developmental Psychology [LE CAT6, LECED CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
- SOC 1201 - Sociology of the Family [LE CAT8, LECED CAT08, SOC SCI, CDIVERSITY] (3.0 cr)
- or EDUC 3340 - Interacting with Diverse Families (3.0 cr)

General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. Compliance with general regulations governing granting of degrees. Students are required to review their degree status in the CEHSP Advising & Academic Services Office early in their senior year.

2. Recommendations for licensure are based on successful completion of all program-related courses; demonstration of satisfactory outcomes required by the program; acceptable performance in field experiences, including student teaching; and successful completion of all tests required by PELSB.

3. Students must obtain personal liability insurance while working in programs.

4. Students are expected to: a) make satisfactory progress each semester, including grades of C- or better in all courses required in the major; b) demonstrate acceptable professional performance in applied learning settings (e.g., laboratory, field experiences, clinical experiences); c) obtain an approved background check before being placed in clinical, field, intern, or student teaching experiences; and d) mandatory advising with a UECH faculty advisor. Students who do not meet program expectations can be dismissed from the major. Details on these requirements are available from the department office.

Upper Division Requirements (7 cr)

- EDUC 2000 - Technology for Teaching and Learning (3.0 cr)
- SPED 4433 - Foundations in Special Education (4.0 cr)

Advanced Writing Requirement (3 cr)

- WRIT 3140 - Advanced Writing: Human Services (3.0 cr)
- or WRIT 3150 - Advanced Writing: Science (3.0 cr)

Block 1 (14 cr)

All courses must be taken concurrently. ECH 4400 is taken in both Block 1 and Block 3 for a total of 2 credits.

- ECH 3050 - Observing Early Relationships in Infants and Toddlers (4.0 cr)
ECH 3055 - Creative Expressions and Emergent Literacy: Birth - Age 8 (4.0 cr)
ECH 3104 - Family Partnerships (1.0 cr)
ECH 4400 - Professional Development Seminar (1.0 cr)
SPED 3103 - Infants and Toddlers with Special Needs (4.0 cr)

Block 2 (15 cr)
All courses must be taken concurrently.
ECH 4010 - Infant and Early Childhood Perceptual and Psychomotor Development (2.0 cr)
SPED 3105 - Young Children with Special Needs: Ages Three-Eight (4.0 cr)
SPED 3106 - Working with Young Children with Low Incidence Disabilities (4.0 cr)
SPED 3109 - Supporting Social/Emotional Development Birth-8 (3.0 cr)
SPED 3205 - Foundations in Early Childhood Assessment (2.0 cr)

Block 3 (19 cr)
All courses must be taken concurrently. ECH 4400 is taken in both Block 1 and Block 3 for a total of 2 credits.
ECH 4021 - Teaching Mathematics: Birth-Age Eight (4.0 cr)
ECH 3022 - Literacy for Young Children: Teaching Reading, Writing, Speaking, and Listening (4.0 cr)
ECH 3030 - Inquiry, Social Studies, and Science Learning: Birth-Age Eight (5.0 cr)
ECH 3060 - Teaching Culturally and Linguistically Diverse Children (3.0 cr)
ECH 4400 - Professional Development Seminar (1.0 cr)
IESE 3326 - Advanced Literacy & Language: Designing & Implementing a Comprehensive Literacy Program (2.0 cr)

Block 4 (12 cr)
All courses must be taken concurrently. Application for student teaching must be made by the 4th Friday of the semester before student teaching. Applications are available from the Dept of Educ website. Incompletes must be cleared before filing application. Students must have grades of C- or better in all required courses in the major to be eligible for student teaching. ECH 4600 register for 9 credits. EDUC 4990 must be taken concurrently with ECH 4600.
ECH 4600 - Student Teaching in Early Childhood/Primary (3.0 - 12.0 cr)
ECH 4610 - Professional Issues Seminar in Early Childhood Education (1.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)
SPED 3206 - Methods of Assessment in Early Childhood Special Education (2.0 cr)

Block 5 (13 cr)
All courses must be taken concurrently. SPED 4600 register for 9 credits.
ECH 4009 - Leadership in Early Childhood Studies (3.0 cr)
SPED 4600 - Student Teaching (1.0 - 12.0 cr)
SPED 4610 - Professional Issues (1.0 cr)

Program Sub-plans
A sub-plan is not required for this program.

Virginia
The requirements for the program at Mesabi Range Community and Technical College (MRCTC) are the same as the UMD on-campus degree. Students are admitted with an associate degree or courses that transfer to UMD's liberal education program. A UMD faculty member is assigned as a cohort adviser and travels to MRCTC at least once a semester; other advising is accomplished via e-mail.
Duluth Campus

Art B.A.
UMD Art and Design, Dept of
School of Fine Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 59
- Degree: Bachelor of Arts

The BA in Art provides study in art with an emphasis on liberal education. Along with the courses required within the major, students must select a minor or second major appropriate for their academic goals.

Honor Requirements: Candidates, nominated by art and design department faculty, receive honors for distinguished achievement demonstrated in part by the senior student exhibition or a senior presentation or project.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students are admitted to pre-major status before admission to this major. To qualify for this program, pre-art students must pass a portfolio review (ART 0902) after completing a minimum of 15 art studio credits selected from the required pre-art core requirements and studio electives. Additionally, students must have a minimum 2.00 GPA overall in art and design courses. The review is scheduled for fall and spring semesters and occurs approximately midway through the semester. Students must submit a portfolio of selected work derived from their art core courses. Portfolios are reviewed by studio art faculty. Specific guidelines for preparation of the portfolio contents and dates for review are distributed at the beginning of each semester.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Minor or second major in another field of study.

2. Attendance at two visual lectures per semester (fall and spring).
SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (Dance, Fine Arts, Music, or Theatre), provided that the student meets pre-requisites for the course(s). MU 15xx ensembles must be repeated once each semester for a total of 3 credits (may require audition). A 2-credit DN course may be substituted (Art or Music students only).

Pre-Art Core Requirements (9 cr)
ART 1010, 1011, 1012, and 1013 may be taken either semester of the first year; they are not sequential.
ART 902 - Studio Art Portfolio Review (0.0 cr)
ART 1010 - Drawing I (3.0 cr)
ART 1012 - 3-D Design (3.0 cr)
ART 1011 - 2-D Design (3.0 cr)
  or ART 1013 - 2-D Digital Design (3.0 cr)

Required Art Courses (19 cr)
ART 1900 - Visual Literacy [LE CAT9, FINE ARTS] (3.0 cr)
ART 3700 - Drawing II (3.0 cr)
ART 4812 - Senior Seminar (3.0 cr)
ART 4898 - Art BA Senior Exhibition (1.0 cr)
ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
ARTH 2300 - The City as a Work of Art [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
  or ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)

Studio Electives (21 cr)
Select four areas from the following plus three additional electives at 3xxx-4xxx.
Take 21 or more credit(s) from the following:
  • ART 2014 - 3-D Digital Studio I (3.0 cr)
  • ART 2016 - Digital Arts: Mixed-Media Studio (3.0 cr)
  • ART 2030 - Digital Arts: Time-based Media (3.0 cr)
  • ART 2040 - Digital Filmmaking: Visual Narratives (3.0 cr)
  • ART 2100 - Painting I (3.0 cr)
  • ART 2200 - Sculpture I (3.0 cr)
  • ART 2400 - Ceramics I (3.0 cr)
  • ART 2500 - Jewelry and Metals I (3.0 cr)
  • ART 2600 - Photography I (3.0 cr)
  • ART 2300 - Printmaking I: Intaglio, Relief (3.0 cr)
    or ART 2301 - Printmaking I: Litho, Screen (3.0 cr)
  • Take 3 or more course(s) from the following:
    • ART 3xxx
    • ART 4xxx

Art History Elective (3 cr)
Take exactly 3 credit(s) from the following:
  • ARTH 2xxx
  • ARTH 3xxx
  • ARTH 4xxx

Courses From Other Programs (4 cr)
UST 1000 - UMD Seminar (1.0 - 2.0 cr)
Advanced Writing
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)
  or WRIT 4230 - Web Design and Digital Culture (3.0 cr)
  or WRIT 4250 - New Media Writing (3.0 cr)
Duluth Campus

Art Education K-12 B.F.A.
UMD Art and Design, Dept of, Education
School of Fine Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 134
- Required credits within the major: 112
- Degree: Bachelor of Fine Arts

The BFA program in art education K-12 is for students who wish to receive licensure to teach art in Minnesota; it is offered in cooperation with the College of Education and Human Service Professions (CEHSP). The program prepares art teachers for kindergarten through the twelfth grade and provides a foundation in a variety of studio areas, art history, and art education methods. To qualify for this program, pre-art education students must pass a portfolio review (ART 0903). In addition to completing liberal education and art courses, each student must gain admission to the Secondary Teacher Education Program (STEP) licensure program during the junior year to complete the education courses required by the State Department of Education and Board of Teaching.

Students entering the secondary and K-12 licensure programs are bound by the policies in effect at the time of application to the licensure program. Admission is based on criteria established by the Department of Education that are consistent with Minnesota policies, as well as standards established by the National Council for Accreditation in Teacher Education.

A student must have: 1) completed EDUC 1101; 2) a GPA of at least 2.50 overall and in major courses completed at the time of application; 3) taken the Minnesota Teacher Licensure Exam (MTLE) or have passing scores on the ACT Plus Writing or SAT exam; 4) minimum 30 documented hours working with students in grades 5 - 12; 5) minimum of 1 letter of recommendation; 6) receive a C- or better in all required courses for the major. Students must submit a letter of application, resume, letters of recommendation, and a copy of their Academic Progress Audit System (APAS) report.

There are alternatives to these established admission procedures to encourage the participation of individuals from underrepresented groups and other students as determined by the department.

Field experiences are an important part of the art education program and includes observations and participation in community, museum and elementary school programs; two apprenticeships in area public and/or private middle schools and high schools concluding with a full semester of supervised student teaching (8 weeks at the elementary and 8 weeks at the middle or high school level).

Students produce a body of work for the Senior Exhibition under the mentorship of faculty in their area.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

Students must have completed at least 9 credits of art core pre-art education requirement courses during the first semester at UMD. The portfolio reviews occur twice a year during the 5th week of the semester. A mandatory information meeting takes place two weeks prior to the review. After successful completion of the art education portfolio review, students become art education majors.

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application: admission is based on criteria established by the Dept. of Edu, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
- Register course for one credit.
  UST 1000 - UMD Seminar (1.0 - 2.0 cr)
Pre-Art Education Requirements (18 cr)
Note: ART 903 - Portfolio Review requires a 2.50 overall GPA and a minimum 3.00 GPA in art and art history courses.

ART 1010 - Drawing I (3.0 cr)
ART 1011 - 2-D Design (3.0 cr)
ART 1012 - 3-D Design (3.0 cr)
ART 1013 - 2-D Digital Design (3.0 cr)
ART 903 - Art Education Portfolio Review (0.0 cr)
ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Make satisfactory academic progress and demonstrate acceptable professional performance in field experiences.

2. Registration for student teaching requires: a) completion of at least 85 percent of teaching major courses; b) completion (graded) of all education methods courses; c) satisfactory academic progress, including grades of C- or better in all courses in the teaching major(s); d) acceptable professional performance in field experiences; and e) an approved background check.

3. Students must have personal liability insurance while they are working in field placement settings.

4. Program completers must pass all tests required by PELSB to be recommended for licensure.

5. Attendance at two Visual Lectures per semester (fall and spring).

6. Passing scores on basic skills test, ACT Plus Writing, SAT and MTLE subject matter content tests, and pedagogy tests and students must complete the edTPA during student teaching as required by the Minnesota Board of Teaching before CEHSP can recommend a graduate to the state for a teaching license.

SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (dance, fine arts, music, or theatre), provided that the student meets pre-requisites for the course(s). MU 15xx ensembles must be repeated once each semester for a total of 3 credits (may require audition). A 2-credit DN course may be substituted (Art or Music students only).

Advanced Art Requirements (4 cr)
ART 3700 - Drawing II (3.0 cr)
ART 4899 - Senior Presentation/Exhibition (1.0 cr)

Major Studio Requirements (15 cr)
ART 2100 - Painting I (3.0 cr)
ART 2200 - Sculpture I (3.0 cr)
or ART 2400 - Ceramics I (3.0 cr)
Take 3 or more course(s) totaling 9 or more credit(s) from the following:

- ART 2014 - 3-D Digital Studio I (3.0 cr)
- ART 2016 - Digital Arts: Mixed-Media Studio (3.0 cr)
- ART 2030 - Digital Arts: Time-based Media (3.0 cr)
- ART 2200 - Sculpture I (3.0 cr)
- ART 2400 - Ceramics I (3.0 cr)
- ART 2500 - Jewelry and Metals I (3.0 cr)
- ART 2600 - Photography I (3.0 cr)
- ART 2300 - Printmaking I: Intaglio, Relief (3.0 cr)
  or ART 2301 - Printmaking I: Litho, Screen (3.0 cr)

Studio Electives (9 cr)

Choose courses from the studio areas.
Take 3 or more course(s) totaling 9 or more credit(s) from the following:

- ART 3xxx
- ART 4xxx

Art Education Courses (13 cr)

- ART 3809 - Art in Elementary Education Methods (3.0 cr)
- ART 3814 - Digital Media in Art Education (3.0 cr)
- ART 3815 - Art in Secondary Education (3.0 cr)
- ART 4812 - Senior Seminar (3.0 cr)
- ART 4903 - Art Education Student Teaching Seminar (1.0 cr)

Art History Electives (6 cr)

Take 6 or more credit(s) from the following:

- ARTH 2xxx
- ARTH 3xxx
- ARTH 4xxx

Education Requirements (31 cr)

- EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
- EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
- EDSE 4204 - Designing Learning Environments and Lessons (3.0 cr)
- EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
- EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
- EDSE 4525 - Assessment for Secondary Education (3.0 cr)
- EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
- EDUC 4381 - Teaching Indigenous Students (3.0 cr)
- EDUC 4500 - Professional Issues and Ethics (1.0 cr)
- HLTH 3202 - Drug Education (2.0 cr)
- SPED 3415 - Special Education in the Secondary School (3.0 cr)

Advanced Writing

- WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)
  or WRIT 3140 - Advanced Writing: Human Services (3.0 cr)

Background Checks

Students are required to have a background check every two years during practicum/student teaching/volunteering in schools and agencies. Proof of complete background check is required prior to any experience in public school and agency settings.

Student Teaching Requirement (12 cr)

All courses must be taken concurrently. Registration for student teaching in senior year requires grades of C- or better in all courses in teaching major(s) and minor; graded completion of all education block courses; completion of 85% of teaching major courses. Students must have personal liability insurance while in field placement settings. Take each course, EDSE 4600 and ELED 4650 for 6 credits. EDUC 4990 must be taken concurrently with EDSE 4600.

- EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
- EDSE 4990 - Education Teacher Performance Assessment (0.0 cr)
- ELED 4650 - Student Teaching in Individual Subjects: K-8 (1.0 - 6.0 cr)
Duluth Campus
Art History B.A.
UMD Art and Design, Dept of
School of Fine Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 62
- Degree: Bachelor of Arts

The BA in art history offers introductory and intermediate level courses in the history of western and non-western art from the prehistoric era to the present. The visual arts and architecture are studied in relation to aesthetic traditions, cultural values, and social experience. Museum internships are available through the Tweed Museum of Art.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
Students are required to take 3 semester(s) of any second language.

1. Minor or second major in another field of study.
2. Final Project: After completing most of the required art history courses required for the major, students are required to write a research paper. The paper may be one written previously for an art history class, an independent study in art history, or an entirely new project. It must be written or revised in consultation with one of the art history faculty, who reads and approves the final version. Check with department for details.
3. Attendance at two visual lectures per semester (fall and spring).

Introductory Course (1 cr)
UST 1000 - UMD Seminar (1.0 - 2.0 cr)
Drawing or Design Course (3 cr)
- ART 1010 - Drawing I (3.0 cr)
- or ART 1011 - 2-D Design (3.0 cr)
- or ART 1012 - 3-D Design (3.0 cr)
- or ART 1013 - 2-D Digital Design (3.0 cr)

Art History Core Courses (40 cr)
Lower Level (15 cr)
- ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
- ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
- ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)
- ARTH 2300 - The City as a Work of Art [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
- ARTH 2380 - A Global History of Contemporary Art (3.0 cr)
- or ARTH 2390 - US Art and Visual Culture in the 20th Century [LE CAT9, LECD CAT09, HUMANITIES, CDIVERSITY] (3.0 cr)

Upper-level Courses (21 cr)
- ARTH 3130 - Modern and Contemporary Mexican Art (3.0 cr)
- ARTH 3150 - Contemporary Global Exhibition (3.0 cr)
- ARTH 3330 - Renaissance Art & Architecture: Europe 1300 - 1550 [HUMANITIES] (3.0 cr)
- ARTH 3370 - Dreamworld and Catastrophe: Art and Visual Culture in the Cold War (3.0 cr)
- ARTH 3140 - Women in Art/Visual Culture in Latin America (3.0 cr)
- or ARTH 3110 - Art of the Ancient Americas (3.0 cr)
- ARTH 3331 - European Architecture and its Legacy (3.0 cr)
- or ARTH 3340 - Baroque and Rococo: European Art & Architecture 1550 - 1750 (3.0 cr)
- ARTH 3360 - Art and Social Change in Europe, Russia, and the United States (3.0 cr)
- or ARTH 3361 - Being and Becoming Modern: European Art 1855 - 1955 (3.0 cr)

Senior Capstone & Senior Paper (4 cr)
- ARTH 4330 - Methods and Theories of Art History and Visual Studies (3.0 cr)
- ARTH 4999 - Senior Paper Art History (1.0 cr)

Foreign Language (12 cr)
Students must take 12 credits of foreign language.

SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (Dance, Fine Arts, Music, or Theatre), provided that the student meets pre-requisites for the course(s). MU 15xx ensembles must be repeated once each semester for a total of 3 credits (may require audition). A 2-credit DN course may be substituted (Art or Music students only).

Advanced Writing Requirement (3 cr)
- WRIT 3100 - Advanced Writing: Language and Literature (3.0 cr)
- or WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)
- or WRIT 4200 - Writing and Cultures (3.0 cr)
Duluth Campus

Art History Minor
UMD Art and Design, Dept of
School of Fine Arts

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 24

The art history minor gives students grounding in western and non-western art history and art historical method. The program integrates knowledge of historical developments in art with concurrent political and social events.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

Minor Core Courses (15 cr)
 ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
 ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
 ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)
 ARTH 2300 - The City as a Work of Art [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
 ARTH 2380 - A Global History of Contemporary Art (3.0 cr)
 or ARTH 2390 - US Art and Visual Culture in the 20th Century [LE CAT9, LECD CAT09, HUMANITIES, CDIVERSITY] (3.0 cr)

Electives (9 cr)
Take 9 or more credit(s) from the following:
• ARTH 3xxx
• ARTH 4xxx
Duluth Campus
Art Minor
UMD Art and Design, Dept of
School of Fine Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 27

The art minor is useful to students desiring cognitive knowledge of and experience in aspects of basic design, studio art, and art history.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Art Minor Courses (12 cr)
ART 1012 - 3-D Design (3.0 cr)
ART 1009 - Fundamentals of Drawing [LE CAT10, FINE ARTS] (3.0 cr)
  or ART 1010 - Drawing I (3.0 cr)
ART 1011 - 2-D Design (3.0 cr)
  or ART 1013 - 2-D Digital Design (3.0 cr)
ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
  or ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
  or ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)

Studio Electives (15 cr)
Select from painting, sculpture, printmaking, ceramics, jewelry and metals, photography, digital studio, drawing (no more than 6 credits in any one area).

Take 15 or more credit(s) from the following:
- ART 1814 - Creating Across Cultures [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
- ART 2xx
- ART 3xx
- ART 4xx
Duluth Campus
Arts in Media Minor
UMD Art and Design, Dept of
School of Fine Arts

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 30

The arts in media minor is useful to students seeking a broad understanding of and hands-on experience with principles, practices, and technologies used in contemporary mass media. It includes coursework across a range of subject areas to offer the student a wide perspective.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Required Minor Courses (15 cr)
- ART 1013 - 2-D Digital Design (3.0 cr)
- ART 1900 - Visual Literacy [LE CAT9, FINE ARTS] (3.0 cr)
- ART 2016 - Digital Arts: Mixed-Media Studio (3.0 cr)
- ART 2030 - Digital Arts: Time-based Media (3.0 cr)
- ART 2600 - Photography I (3.0 cr)

Interdisciplinary/Media Theory/History (6 cr)
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
- ANTH 1620 - Introduction to Public Culture: Citizenship, Science, and Culture [GLOBAL PER] (4.0 cr)
- ARTH 2380 - A Global History of Contemporary Art (3.0 cr)
- ARTH 2620 - History of Photography (3.0 cr)
- ARTH 3150 - Contemporary Global Exhibition (3.0 cr)
- COMM 1500 - Media and Society [LE CAT8, HUMANITIES] (3.0 cr)
- TH 1053 - Film and Society [LE CAT9] (3.0 cr)
- TH 2851 - Film History (3.0 cr)
- COMM 2101 - Foundations of Mass Communication [LE CAT8, SOC SCI] (3.0 cr)
- COMM 3211 - Communication and Technology in the Information Age (3.0 cr)
- COMM 3505 - Media Communications (3.0 cr)
- COMM 3520 - Media Effects [SOC SCI] (3.0 cr)
- COMM 3560 - Video Game Entertainment (3.0 cr)
- WRIT 4230 - Web Design and Digital Culture (3.0 cr)
- WRIT 4250 - New Media Writing (3.0 cr)

Experiential Electives (9 cr)
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
- ART 1305 - Social Multiples: Availability and Circulation [FINE ARTS] (3.0 cr)
- ART 2014 - 3-D Digital Studio I (3.0 cr)
- ART 2018 - Digital Arts: Interactive Media (3.0 cr)
- ART 2040 - Digital Filmmaking: Visual Narratives (3.0 cr)
- ART 2061 - Digital Arts: Installation and Collaborative Media (3.0 cr)
- ART 2080 - Digital Filmmaking: Experimental Techniques (3.0 cr)
- ART 2140 - Sculpture II: Robotics and Physical Computing (3.0 cr)
- ART 2814 - Digital Media in Art Education (3.0 cr)
- ART 4016 - Digital Arts: Advanced Projects (3.0 cr)
- ART 4040 - Digital Filmmaking: Advanced Projects (3.0 cr)
- ART 4091 - Individual Study in Electronic Arts (1.0 - 3.0 cr)
- ART 4600 - Photography: Digital Portfolio (3.0 cr)
- ART 4793 - Intermedia Studio (1.0 - 3.0 cr)
Duluth Campus
Dance Minor
Theatre
School of Fine Arts

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 23 to 31

The Department of Theatre offers two emphases within the dance minor. The Dance Studies Emphasis provides students an in-depth appreciation of dance as a performance and social art form, while the Applied Dance Emphasis offers experienced dancers opportunities to further develop technique, artistry, and knowledge of the field. Technique courses are offered in ballet, modern, jazz, and tap, and are complemented with courses in dance appreciation, dance history, dance composition, and/or related academic areas. Annual dance concerts provide opportunities for performance and choreography.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Dance minors should confer with a minor adviser from the Department of Theatre to develop a sound schedule for taking courses to complete the minor in less than four years. Students are advised to note prerequisites and to take courses in proper sequence.

Program Sub-plans
Students are required to complete one of the following sub-plans.

Applied Dance

History/Analysis (9 cr)
DN 1001 - Introduction to the World of Dance [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
DN 3401 - Dance Composition (3.0 cr)
DN 3611 - Dance History (3.0 cr)

Beginning Level Technique (0 - 8 cr)
Students with previous dance study may be exempt from some Beginning Level Technique requirements and should consult the department about placement.
DN 1101 - Modern Dance Technique I [LE CAT10, FINE ARTS] (2.0 cr)
DN 1111 - Jazz Dance Technique I [LE CAT10, FINE ARTS] (2.0 cr)
DN 1121 - Tap Dance Technique I (2.0 cr)
DN 1131 - Ballet Technique I [LE CAT10, FINE ARTS] (2.0 cr)

Intermediate Level Techniques (8 cr)
Take 4 or more course(s) totaling 8 or more credit(s) from the following:
• DN 2111 - Jazz Dance Techniques II (2.0 cr)
• DN 2131 - Ballet Technique II (2.0 cr)
• DN 3201 - Modern Dance Technique II (2.0 cr)
• DN 3211 - Jazz Dance Technique III (2.0 cr)
• DN 3231 - Ballet Technique III (2.0 cr)

Intermediate/Advanced Level Technique (6 cr)
Take 6 or more credit(s) from the following:
• DN 3221 - Tap Dance Technique II (2.0 cr)
• DN 3241 - Social Dance for the Stage (1.0 cr)
• DN 3995 - Special Topics (Various Titles to be Assigned) (1.0 - 9.0 cr)
• DN 4311 - Jazz Dance Technique IV (2.0 cr)
• DN 4331 - Ballet Technique IV (2.0 cr)

Dance Studies

History/Analysis (9 cr)
DN 1001 - Introduction to the World of Dance [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
DN 3611 - Dance History (3.0 cr)
DN 3995 - Special Topics (Various Titles to be Assigned) (1.0 - 9.0 cr)
or TH 1071 - Musical Theatre History [LE CAT9, HUMANITIES] (3.0 cr)

**Beginning Level Technique Classes (8 cr)**
After consultation with the instructor, a Techniques 1 class in a particular style could be taken twice rather than one Fundamentals class and one Techniques class.

Take 4 or more course(s) totaling 8 or more credit(s) from the following:
- DN 1011 - Tap Dance Fundamentals [LE CAT10] (2.0 cr)
- DN 1101 - Modern Dance Technique I [LE CAT10, FINE ARTS] (2.0 cr)
- DN 1110 - Jazz Dance Fundamentals [FINE ARTS] (2.0 cr)
- DN 1111 - Jazz Dance Technique I [LE CAT10, FINE ARTS] (2.0 cr)
- DN 1121 - Tap Dance Technique I (2.0 cr)
- DN 1131 - Ballet Technique I [LE CAT10, FINE ARTS] (2.0 cr)

**Intermediate Level Techniques Classes (6 cr)**
It is strongly encouraged that students take classes in more than one style at the Intermediate level.

Take 6 or more credit(s) from the following:
- DN 2101 - Physical Conditioning for Dance (1.0 cr)
- DN 2111 - Jazz Dance Technique II (2.0 cr)
- DN 2131 - Ballet Technique II (2.0 cr)
- DN 3201 - Modern Dance Technique II (2.0 cr)
- DN 3211 - Jazz Dance Technique III (2.0 cr)
- DN 3231 - Ballet Technique III (2.0 cr)
Duluth Campus
Film Studies Minor
Theatre
School of Fine Arts

• Program Type: Undergraduate free-standing minor
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 18

The film studies minor provides an interdisciplinary approach to film, exploring the medium through practical, historical, and social contexts. Required courses in the minor give students an understanding of the art of filmmaking, a history of film, and how film connects to society. Electives in the minor offer students the opportunity to focus on more specific aspects of film ranging from film genres to photography to screenwriting.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Minor Courses (9 cr)
TH 1051 - Introduction to Film [LE CAT9, FINE ARTS] (3.0 cr)
TH 1053 - Film and Society [LE CAT9] (3.0 cr)
TH 2851 - Film History (3.0 cr)

Elective Courses (9 cr)
Students must take a total of 9 elective credits.

Practical/Experiential
Take 1 - 2 course(s) totaling 3 - 6 credit(s) from the following:
• ART 2030 - Digital Arts: Time-based Media (3.0 cr)
• ART 2040 - Digital Filmmaking: Visual Narratives (3.0 cr)
• ART 3040 - Digital Filmmaking: Experimental Techniques (3.0 cr)
• ART 4040 - Digital Filmmaking: Advanced Projects (3.0 cr)
• TH 3851 - Screenwriting (3.0 cr)

Historical/Theoretical
Take 1 - 2 course(s) totaling 3 - 8 credit(s) from the following:
• AMIN 4640 - American Indians in the Movies [HUMANITIES, CDIVERSITY] (3.0 cr)
• ENGL 4292 - Literature into Film (4.0 cr)
• FR 2315 - French Cinema [LE CAT9, LEIP CAT09, HUMANITIES] (4.0 cr)
• GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
• MU 1004 - Music in Film [FINE ARTS] (3.0 cr)
• POL 3025 - Popular Culture and Politics [HUMANITIES] (4.0 cr)
• SPAN 4017 - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
• SPAN 4030 - Cinema and Culture of Spain [FINE ARTS] (4.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)
Duluth Campus
Graphic Design B.F.A.
UMD Art and Design, Dept of
School of Fine Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120 to 125
- Required credits within the major: 91 to 112
- Degree: Bachelor of Fine Arts

The graphic design profession uses the creative process and technology to communicate ideas and messages. Delivery of the message can be multidimensional, print or screen based, interactive, involve sound and motion, be physical or virtual. Graphic design involves type and language, abstract and figurative imagery, concept, technology, and craft. The discipline takes place within commercial, academic, and institutional contexts in the private and public realms, and allows individuals to enter a rewarding profession that demands creativity and vision. Acknowledging the interdisciplinary nature of the profession, the Department of Art and Design offers two distinct sub plans, one that combines graphic design with complementary studio skills and practices, and one that pairs graphic design with coursework in business and marketing.

To qualify for this program, pre-graphic design students must pass a portfolio review (ART 0901) during the second semester of their first year. Department honors requirements: Candidates nominated by art and design department faculty receive honors for distinguished achievement, demonstrated in part by projects and portfolios completed in Senior Design Studio I and II (ART 4922 and 4933).

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major.

Students must pass portfolio review. The review occurs (approximately) during the seventh week of spring semester each year and is conducted by the graphic design faculty. Advanced placement students may be eligible for a portfolio review during the week before the start of fall semester. After completion of at least 9 credits of pre-graphic design requirement ART core courses, students must submit a portfolio of work selected from the courses, and a specified writing sample for the review.

After admission to the graphic design major (passing the portfolio review), the coursework required for the program is sequential and takes a minimum of three years, or six semesters (see sample plan). Transfer students, and students who change their major to graphic design, need to be aware of this time requirement to complete the program.

Due to limited space, the Graphic Design program with Marketing sub plan is limited to 30 new majors annually.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Pre-Graphic Design Requirements (12 cr)
Note: ART 1010, 1011, 1013 and 1900 may be taken either semester of the first year. They are not sequential.

Graphic Design Portfolio Review (ART 0901) requires a 2.00 GPA overall and in art and art history courses.
ART 901 - Graphic Design Portfolio Review (0.0 cr)
ART 1010 - Drawing I (3.0 cr)
ART 1011 - 2-D Design (3.0 cr)
ART 1013 - 2-D Digital Design (3.0 cr)
ART 1900 - Visual Literacy [LE CAT9, FINE ARTS] (3.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. Transfer credits must carry a minimum grade of C.

2. Attendance at two Visual Culture lectures per semester (fall and spring).

Major Courses (33 cr)

- ART 2905 - Design Technology I (3.0 cr)
- ART 2906 - Design Technology II (3.0 cr)
- ART 2907 - Typography I (3.0 cr)
- ART 2911 - Graphic Design I (3.0 cr)
- ART 3906 - Emerging Media Design (3.0 cr)
- ART 3922 - Graphic Design II (3.0 cr)
- ART 3933 - Graphic Design III (3.0 cr)
- ART 3937 - Typography II (3.0 cr)
- ART 4908 - Interactive Design I (3.0 cr)
- ART 4909 - Interactive Design II (3.0 cr)
- ART 4922 - Senior Design Studio I (3.0 cr)

Final Project (3 cr)

Students complete the capstone design course, ART 4933. Portfolio project addresses individual student needs and highlights design strengths for career placement. Instructors assessing the senior project maintain criteria used in the entry-level review rubric. Results are reflected in the grade.

- ART 4933 - Senior Design Studio II (3.0 cr)

Art History (6 cr)

- ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
- or ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
- or ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)
- ARTH 2901 - History of Graphic Design (3.0 cr)

SFA Additional Requirement (3 cr)

Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (dance, fine arts, music, or theatre), provided that the student meets pre-requisites for the course(s). MU 15xx ensembles must be repeated once each semester for a total of 3 credits (may require audition). A 2-credit DN course may be substituted (art or music students only).

Program Sub-plans

Students are required to complete one of the following sub-plans.

Marketing

Major Courses (9 cr)

- ARTH 2390 - US Art and Visual Culture in the 20th Century [LE CAT9, LECD CAT09, HUMANITIES, CDIVERSITY] (3.0 cr)
ART 4944 - Graphic Design IV (3.0 cr)  
  or ART 4955 - Graphic Design V (3.0 cr)

Sustainability  
ART 1004 - Sustainable Visual Culture Practices [SUSTAIN] (3.0 cr)  
  or ART 3305 - Sustainability Studio: Theory and Practice [SUSTAIN] (3.0 cr)

Art History Electives (3 cr)  
Take 3 or more credits from the following:  
  • ARTH 2xxx  
  • ARTH 3xxx

Pre-Business (6 cr)  
ACCT 2001 - Principles of Financial Accounting (3.0 cr)

Marketing (18 cr)  
Group A (9 cr)  
  • MKTG 3701 - Principles of Marketing (3.0 cr)  
  • MKTG 3711 - Marketing Research (3.0 cr)  
  • MKTG 4731 - Consumer Behavior (3.0 cr)

Group B (9 cr)  
Take 9 or more credits from the following:  
  • MKTG 3721 - Social Media Marketing (3.0 cr)  
  • MKTG 3741 - Fundamentals of Selling (3.0 cr)  
  • MKTG 3751 - Marketing Ethics (3.0 cr)  
  • MKTG 3771 - Sports Marketing (3.0 cr)  
  • MKTG 4774 - International Marketing (3.0 cr)  
  • MKTG 3797 - Marketing Internship (1.0 - 6.0 cr)  
  • MKTG 4721 - Advertising and Marketing Communications (3.0 cr)  
  • MKTG 4741 - Developing and Marketing New Products (3.0 cr)  
  • MKTG 4751 - Retailing (3.0 cr)  
  • MKTG 4781 - Marketing Management and Strategy (3.0 cr)  
  • MKTG 4795 - Special Topics (Various Topics to be Assigned) (3.0 cr)

Courses Required From Other Programs (18 cr)  
Advanced Writing  
  • WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)  
    or WRIT 31xx Adv Writing (3 cr)

Business  
  • ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)

Communication  
  • COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)  
    or COMM 1222 - Interpersonal Communication [LE CAT3, LEGD CAT03, COMM & LAN] (3.0 cr)

Math  
  • MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)  
    or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Psychology  
  • PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)

Studio  
Major Courses (9 cr)  
  • ART 1012 - 3-D Design (3.0 cr)  
  • ART 4944 - Graphic Design IV (3.0 cr)  
  • ART 4955 - Graphic Design V (3.0 cr)

Studio Courses (15 cr)  
Take 3 or more courses totaling 9 or more credits from the following:  
  • ART 2014 - 3-D Digital Studio I (3.0 cr)  
  • ART 2016 - Digital Arts: Mixed-Media Studio (3.0 cr)  
  • ART 2018 - Digital Arts: Interactive Media (3.0 cr)  
  • ART 2030 - Digital Arts: Time-based Media (3.0 cr)  
  • ART 2040 - Digital Filmmaking: Visual Narratives (3.0 cr)  
  • ART 2100 - Painting I (3.0 cr)  
  • ART 2200 - Sculpture I (3.0 cr)  
  • ART 2400 - Ceramics I (3.0 cr)  
  • ART 2500 - Jewelry and Metals I (3.0 cr)  
  • ART 2600 - Photography I (3.0 cr)  
  • ART 2300 - Printmaking I: Intaglio, Relief (3.0 cr)  
    or ART 2301 - Printmaking I: Litho, Screen (3.0 cr)
  • Upper Level Studio Electives
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
• ART 3xxx
• ART 4xxx

Art History Electives (6 cr)
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
• ARTH 2xxx
• ARTH 3xxx

Advanced Writing (3 cr)
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)
or WRIT 4230 - Web Design and Digital Culture (3.0 cr)
or WRIT 4250 - New Media Writing (3.0 cr)
Duluth Campus
Jazz Studies B.Mus.
Music
School of Fine Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 93
- Degree: Bachelor of Music

The B.Mus. in jazz studies is for students pursuing programs of intensive study to prepare for professional careers in jazz studies and/or for acceptance into a graduate degree program, to assist students to acquire high quality jazz performance artistry, and to provide students advanced historical, and theoretical knowledge of jazz music(s).

Department honors requirements: Candidates, nominated by music department faculty, receive honors for distinguished achievement in musical performance, composition, or exceptional ability and accomplishment as a music educator.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.50 transferring from outside the University

Students must pass a performance audition to be accepted into any music degree program. At the time of the audition, students must also complete diagnostic examinations in theory/aural/keyboard skills and an interview with the department head or an appointed designee. Any student who receives provisional acceptance into a degree program must pass a review (usually at the end of the first semester) to receive full acceptance. That review includes recommendations of major instructors and successful completion of an applied jury. Transfer students must have a 2.50 GPA.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Minimum of C- in all required courses.
Introductory Course (1 cr)
Music majors register for 1 cr
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Music Core (22 cr)
MU 100 - Recital Hour (0.0 cr)
MU 1111 - Tonal Harmony I (3.0 cr)
MU 1112 - Ear-Training and Sight-Singing I (1.0 cr)
MU 1121 - Tonal Harmony II [LOGIC & QR] (3.0 cr)
MU 1122 - Ear-Training II (1.0 cr)
MU 2111 - Tonal Harmony III (3.0 cr)
MU 2112 - Ear-Training III (1.0 cr)
MU 2121 - Tonal Harmony IV (3.0 cr)
MU 2122 - Ear-Training, Sight Singing and Improvisation (1.0 cr)
MU 3201 - Music History I (3.0 cr)
MU 3202 - Music History II (3.0 cr)

Major Core Requirements (24 cr)
MU 4997 (Register for 1 cr)
MU 1005 - Jazz Studies [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
MU 1421 - Piano Class I (1.0 cr)
MU 1422 - Piano Class II (1.0 cr)
MU 2110 - Jazz Theory (2.0 cr)
MU 2802 - Jazz Improvisation I (2.0 cr)
MU 2803 - Jazz Improvisation II (2.0 cr)
MU 3705 - Instrumental Conducting I (1.0 cr)
MU 3805 - Jazz Writing I (2.0 cr)
MU 3806 - Jazz Writing II (2.0 cr)
MU 3807 - Jazz Literature (2.0 cr)
MU 4300 - Senior Recital (1.0 cr)
MU 4803 - Jazz Pedagogy (2.0 cr)
MU 4807 - Music Industry (2.0 cr)
MU 4997 - Internship in Music (1.0 - 2.0 cr)

Applied Instruction (16 cr)
Students must complete 16 credits; 8 credits from MU 13xx and 8 credits from MU 43xx. With prior approval, students may complete 12 credits of MU 13xx and 4 credits of MU 43xx. MU 0100 must be taken concurrently each semester with applied instruction in principal instrument.

Principal Instrument - 13xx
Two credits of principal instrument each semester
Take 8 or more credit(s) from the following:
• MU 13xx

Principal Instrument - 43xx
Two credits of principal instrument each semester
Take 8 or more credit(s) from the following:
• MU 43xx

Applied Jazz Instruction (8 cr)
Piano majors must take a minimum of 4 credits from MU 1321 and guitar majors must take a minimum of 4 credits from MU 1391.
Take 8 or more credit(s) from the following:
• MU 1321 - Piano-Major (2.0 - 3.0 cr)
• MU 1327 - Jazz Applied (2.0 cr)
• MU 1391 - Classical Guitar-Major (2.0 - 3.0 cr)

Ensemble Requirements (16 credits)
Take 2 credits each semester.
Take 6 or more credit(s) from the following:
• MU 1505 - Jazz Ensemble [LE CAT10, LECD CAT10, FINE ARTS] (1.0 cr)
• MU 4505 - Jazz Ensemble (1.0 cr)
Take 2 or more credit(s) from the following:
• MU 1501 - Concert Band [LE CAT10, FINE ARTS] (1.0 cr)
• MU 1502 - Symphonic Wind Ensemble [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
• MU 1503 - Symphony Orchestra [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
• MU 1504 - Chamber Orchestra [LE CAT10, FINE ARTS] (1.0 cr)
• MU 1510 - Concert Chorale [LE CAT10, FINE ARTS] (1.0 cr)
• MU 1511 - University Singers [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
• MU 1515 - Percussion Ensemble (1.0 cr)
• MU 4501 - Concert Band (1.0 cr)
• MU 4502 - Symphonic Wind Ensemble (1.0 cr)
• MU 4503 - Symphony Orchestra (1.0 cr)
• MU 4504 - Chamber Orchestra (1.0 cr)
• MU 4510 - Concert Chorale (1.0 cr)
• MU 4511 - University Singers (1.0 cr)
• MU 4515 - Percussion Ensemble (1.0 cr)

Must include jazz combo or jazz guitar ensemble

Take 6 or more credit(s) from the following:
• MU 1541 - Chamber Music (1.0 cr)
• MU 4541 - Chamber Music (1.0 cr)

Advanced Writing (3 cr)
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)

SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (art, art history, dance, fine arts, or theatre), provided that the student meets prerequisites for the course(s). A 2-credit DN course may be substituted (art or music students only).

Proficiency Exam
Advanced proficiency in principal instrument
MU 300 - Advanced Standing Exam (0.0 cr)
Duluth Campus

Jazz Studies Minor

Music
School of Fine Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 28

The jazz studies minor may be selected by B.Mus. music majors and non-majors and offers additional study in jazz to students with a background and interest in jazz style and performance.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Applied Instruction (4 cr)

Principal instrument

1 credit of a principal instrument each semester

Take 4 or more credit(s) from the following:

- MU 1xxx

Minor Courses (24 cr)

Students must take MU 100 every semester in which they take applied instruction on their principal instrument, for a total of 4 semesters.

- MU 100 - Recital Hour (0.0 cr)
- MU 1005 - Jazz Studies [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
- MU 1111 - Tonal Harmony I (3.0 cr)
- MU 1112 - Ear-Training and Sight-Singing I (1.0 cr)
- MU 1121 - Tonal Harmony II [LOGIC & QR] (3.0 cr)
- MU 1122 - Ear-Training II (1.0 cr)
- MU 2802 - Jazz Improvisation I (2.0 cr)
- MU 2803 - Jazz Improvisation II (2.0 cr)
- MU 4803 - Jazz Pedagogy (2.0 cr)
- MU 4807 - Music Industry (2.0 cr)
- MU 1541 - 0.5 cr for 2 semesters for a total of 1.0 cr.
  - MU 1505 - Jazz Ensemble [LE CAT10, LECD CAT10, FINE ARTS] (1.0 cr)
  or MU 1541 - Chamber Music (1.0 cr)
- MU 4541 - 0.5 cr for 2 semesters for a total of 1.0 cr.
  - MU 4505 - Jazz Ensemble (1.0 cr)
  or MU 4541 - Chamber Music (1.0 cr)

Take 1 or more course(s) from the following:

- MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
- MU 2003 - Survey of American Music [LE CAT9, FINE ARTS, CDIVERSITY] (3.0 cr)
- MU 2005 - African Roots of American Music [LE CAT9, LECD CAT09, FINE ARTS] (3.0 cr)
- MU 3202 - Music History II (3.0 cr)
Duluth Campus
Music B.A.
School of Fine Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 61
• Degree: Bachelor of Arts

The BA in music offers students a general course of music study in a liberal arts setting, providing students an overview of music theory, history, and performance practice. The program helps students acquire a broad and general understanding of music as a cultural/social phenomenon. Along with the courses required within the major, students must select a minor or second major appropriate to their academic goals.

Department Honors Requirements: Candidates, nominated by music department faculty, receive honors for distinguished achievement in musical performance, composition, or exceptional ability and accomplishment as a music educator.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
• 2.50 transferring from outside the University

Students must pass a performance audition to be accepted into any music degree program. At the time of the audition, students must also complete diagnostic examinations in theory/aural/keyboard skills and an interview with the department head or an appointed designee. Any student who receives provisional acceptance into a degree program must pass a review (usually at the end of the first semester) to receive full acceptance. That review includes recommendations of major instructors and successful completion of an applied jury. Transfer students must have a 2.50 GPA.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Minor or second major in another field outside of music.
2. Courses with grades less than C- will not count toward the major.

**Introductory Course (1 cr)**
Music majors register for 1 credit.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)

**Music Core (22 cr)**
It is strongly recommended that BA students with voice as principal instrument register for MU 1411 Diction: Italian and English in the fall semester of their first year.

MU 100 - Recital Hour (0.0 cr)
MU 1111 - Tonal Harmony I (3.0 cr)
MU 1112 - Ear-Training and Sight-Singing I (1.0 cr)
MU 1121 - Tonal Harmony II [LOGIC & OR] (3.0 cr)
MU 1122 - Ear-Training II (1.0 cr)
MU 2111 - Tonal Harmony III (3.0 cr)
MU 2112 - Ear-Training III (1.0 cr)
MU 2121 - Tonal Harmony IV (3.0 cr)
MU 2122 - Ear-Training, Sight Singing and Improvisation (1.0 cr)
MU 3201 - Music History I (3.0 cr)
MU 3202 - Music History II (3.0 cr)

**Major Core Requirements (1 cr)**

MU 3350 - Half-Recital (0.0 cr)
MU 3703 - Choral Conducting (1.0 cr)
or MU 3705 - Instrumental Conducting I (1.0 cr)

**Applied Instruction (16 cr)**
Students must complete 16 credits; 8 credits from MU 13xx and 8 credits from MU 43xx. With prior approval, students may complete 12 credits of MU 13xx and 4 credits of MU 43xx. MU 0100 must be taken concurrently each semester with applied instruction in principal instrument.

**Principal Instrument - 13xx**
Two credits of principal instrument each semester
Take 8 or more credit(s) from the following:
- MU 13xx

**Principal Instrument - 43xx**
Two credits of principal instrument each semester
Take 8 or more credit(s) from the following:
- MU 43xx

**Keyboard Instruction (2 cr)**
MU 1421 - Piano Class I (1.0 cr)
MU 1422 - Piano Class II (1.0 cr)
or Taken for 2 semesters
MU 1322 - Piano-Non Major (1.0 cr)

**Ensembles (8 cr)**
1 each semester
Take 8 or more credit(s) from the following:
Take 4 or more credit(s) from the following:
- MU 1501 - Concert Band [LE CAT10, FINE ARTS] (1.0 cr)
- MU 1502 - Symphonic Wind Ensemble [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
- MU 1503 - Symphony Orchestra [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
- MU 1504 - Chamber Orchestra [LE CAT10, FINE ARTS] (1.0 cr)
- MU 1505 - Jazz Ensemble [LE CAT10, LECD CAT10, FINE ARTS] (1.0 cr)
- MU 1510 - Concert Chorale [LE CAT10, FINE ARTS] (1.0 cr)
- MU 1511 - University Singers [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
- MU 1512 - Chamber Singers [LE CAT10, FINE ARTS] (1.0 cr)
- MU 1513 - Vocal Jazz Ensemble [LE CAT10, LECD CAT10, FINE ARTS] (1.0 cr)
- MU 1515 - Percussion Ensemble (1.0 cr)
- MU 3510 - Opera Studio (1.0 cr)
Take 4 or more credit(s) from the following:
• MU 3510 - Opera Studio (1.0 cr)
• MU 4501 - Concert Band (1.0 cr)
• MU 4502 - Symphonic Wind Ensemble (1.0 cr)
• MU 4503 - Symphony Orchestra (1.0 cr)
• MU 4504 - Chamber Orchestra (1.0 cr)
• MU 4505 - Jazz Ensemble (1.0 cr)
• MU 4510 - Concert Chorale (1.0 cr)
• MU 4511 - University Singers (1.0 cr)
• MU 4512 - Chamber Singers (1.0 cr)
• MU 4513 - Vocal Jazz Ensemble (1.0 cr)
• MU 4515 - Percussion Ensemble (1.0 cr)

Electives (5 cr)
Take 5 or more credit(s) from the following:
• MU 2xxx
• MU 3xxx
• MU 4xxx
• MU 5xxx

Advanced Writing (3 cr)
Advanced Writing
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)

Proficiency Exam
Advanced proficiency in principal instrument
MU 300 - Advanced Standing Exam (0.0 cr)

SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (Art, Art History, Dance, Fine Arts, or Theatre), provided that the student meets pre-requisites for the course(s). A 2-credit DN course may be substituted (Art or Music students only).
Duluth Campus
Music Education B.Mus.
Music
School of Fine Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 129 to 130
• Required credits within the major: 110 to 111
• Degree: Bachelor of Music

The B.Mus. in music education is for students planning to teach classroom instrumental or vocal music. The program prepares and inspires students to acquire effective teaching skills and to develop a commitment to teaching and to music education. It prepares students to be advocates for music in the K-12 setting. Graduates with this degree may be recommended for Minnesota Teacher Licensure.

Department Honors Requirements: Candidates, nominated by music department faculty, receive honors for distinguished achievement in musical performance, composition, or exceptional ability and accomplishment as a music educator.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
• 2.50 transferring from outside the University

Students must pass performance audition, diagnostic exams in theory/aural/keyboard skills & interview with dept head/appointed designee. Students who receive provisional acceptance must pass a review to receive full acceptance, including recommendations from major instructors, and successful completion of an applied jury. To be accepted into educ component, students must 1) take EDUC 1101; 2) GPA of at least 2.50 cumulative including transfer work & major courses completed at time of application; 3) MTLE Basic Skills Test for licensure or passing scores on ACT + Writing or SAT Exam; 4) minimum of 30 documented hrs working with students, grades 5-12; 5) minimum 1 letter of recommendation; 6) C- or better in all required courses for major. Students must submit letter of application, resume, letters of recommendation & APAS report. There are alternatives to admission procedures to encourage the participation of individuals from underrepresented groups & students as determined by the dept.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
1. Demonstration of acceptable professional performance in field experiences.

2. Those who complete the program must pass all tests required by PELSB to be recommended for licensure.

3. Registration for student teaching requires: a) completion of at least 85% of teaching major courses; b) completion (graded) of all education methods courses; c) satisfactory academic progress, including grades of C- or better in all courses in the teaching major(s); d) acceptable professional performance in field experiences; and e) an approved background check.

Students entering the Secondary (5-12) & K-12 licensure programs are bound by the policies in effect at the time of application; admission is based on criteria established by the Dept. of Educ, consistent with MN policies as established by the MN Professional Educator Licensing and Standards Board (PELSB). Students must meet the admission requirements to the blocks. They can be found online at: https://z.umn.edu/stepapplication.

Introductory Course (1 cr)
Register for 1 credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Music Core (22 cr)
MU 100 - Recital Hour (0.0 cr)
MU 1111 - Tonal Harmony I (3.0 cr)
MU 1112 - Ear-Training and Sight-Singing I (1.0 cr)
MU 1121 - Tonal Harmony II [LOGIC & QR] (3.0 cr)
MU 1122 - Ear-Training II (1.0 cr)
MU 2111 - Tonal Harmony III (3.0 cr)
MU 2112 - Ear-Training III (1.0 cr)
MU 2121 - Tonal Harmony IV (3.0 cr)
MU 2122 - Ear-Training, Sight Singing and Improvisation (1.0 cr)
MU 3201 - Music History I (3.0 cr)
MU 3202 - Music History II (3.0 cr)

Teacher Education Courses (21 cr)
EDSE 3206 - Apprenticeship: Secondary School (2.0 cr)
EDSE 4100 - Teaching in a Diverse Society (3.0 cr)
EDSE 4214 - Teaching Content-Area Reading (2.0 cr)
EDSE 4501 - Adolescent/Adult Development and Learning Theory (3.0 cr)
EDUC 1101 - Education in Modern Society [LE CAT7, HUMANITIES] (3.0 cr)
EDUC 4381 - Teaching Indigenous Students (3.0 cr)
HLTH 3202 - Drug Education (2.0 cr)
SPED 3415 - Special Education in the Secondary School (3.0 cr)

Advanced Writing (3 cr)
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)

SFA Additional Liberal Education Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the student's chosen major (art, art history, dance, fine arts or theatre), provided that the student meets pre-requisites for the course(s). A 2-credit DN course may be substituted.

Student Teaching (13 cr)
Registration for student teaching in the senior year requires: grades of C- or better in all courses in the teaching major(s) and minor(s); completion (graded) of all education block courses; completion of at least 85 percent of teaching major courses. Students must have personal liability insurance while they are working in field placement settings.

ELED 4650 and EDSE 4600 (register each course for 6 credits).

EDUC 4990 must be taken concurrently with EDSE 4600.
EDSE 4600 - Student Teaching (3.0 - 12.0 cr)
EDUC 4500 - Professional Issues and Ethics (1.0 cr)
EDUC 4990 - Education Teacher Performance Assessment (0.0 cr)
ELED 4650 - Student Teaching in Individual Subjects: K-8 (1.0 - 6.0 cr)
Program Sub-plans
Students are required to complete one of the following sub-plans.

Instrumental K-12
The B.Mus. in music education Instrumental K-12 is for students planning to teach classroom in instrumental music. Completion of this degree results in the student receiving Minnesota Teacher Licensure, Instrumental Music K-12.

Instrumental K-12 Courses (25 cr)
- MU 1421 - Piano Class I (1.0 cr)
- MU 1422 - Piano Class II (1.0 cr)
- MU 1441 - Vocal Techniques (1.0 cr)
- MU 1442 - Percussion Techniques (1.0 cr)
- MU 2443 - Woodwind Techniques (1.0 cr)
- MU 2444 - String Techniques (1.0 cr)
- MU 2447 - Brass Techniques (1.0 cr)
- MU 2505 - Introduction to Music Education (1.0 cr)
- MU 3350 - Half-Recital (0.0 cr)
- MU 3606 - Field Experience: Classroom Music Pre K-8 (1.0 cr)
- MU 3607 - Instrumental Music Methods (3.0 cr)
- MU 3608 - Teaching Elementary Music I (2.0 cr)
- MU 3609 - Teaching Elementary Music II (2.0 cr)
- MU 3705 - Instrumental Conducting I (1.0 cr)
- MU 3706 - Instrumental Conducting II (1.0 cr)
- MU 4101 - Instrumental Arranging (2.0 cr)
- MU 1005 - Jazz Studies [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
  or MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
  or MU 2005 - African Roots of American Music [LE CAT9, LECD CAT09, FINE ARTS] (3.0 cr)
- MU 2110 - Jazz Theory (2.0 cr)
- MU 3101 - Form and Analysis (2.0 cr)
- MU 4103 - Counterpointal Techniques (2.0 cr)
- MU 5201 - Advanced Music History (2.0 cr)

Applied Instruction (14 cr)
MU 0100 must be taken concurrently each semester with applied instruction in principal instrument.
Take 14 or more credit(s) from the following:
- 2 credits each semester
- Take 8 or more credit(s) from the following:
  - •MU 1xxx
- •2 credits each semester excluding the student teaching semester.
- Take 6 or more credit(s) from the following:
  - •MU 4xxx

Ensemble Requirements (7 cr)
1 credit each semester excluding student teaching semester.
Take 4 or more credit(s) from the following:
- •MU 1501 - Concert Band [LE CAT10, FINE ARTS] (1.0 cr)
- •MU 1502 - Symphonic Wind Ensemble [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
- •MU 1503 - Symphony Orchestra [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
Take 3 or more credit(s) from the following:
- •MU 4501 - Concert Band (1.0 cr)
- •MU 4502 - Symphonic Wind Ensemble (1.0 cr)
- •MU 4503 - Symphony Orchestra (1.0 cr)

Additional Ensemble (1 cr)
Take 1 or more credit(s) from the following:
- •MU 1504 - Chamber Orchestra [LE CAT10, FINE ARTS] (1.0 cr)
- •MU 1505 - Jazz Ensemble [LE CAT10, LECD CAT10, FINE ARTS] (1.0 cr)
- •MU 1541 - Chamber Music (1.0 cr)
- •MU 4504 - Chamber Orchestra (1.0 cr)
- •MU 4505 - Jazz Ensemble (1.0 cr)
- •MU 4541 - Chamber Music (1.0 cr)

Proficiency Exam
Advanced proficiency in principal instrument.
- MU 300 - Advanced Standing Exam (0.0 cr)

Vocal K-12
The B.Mus. in music education Vocal K-12 is for students planning to teach classroom in vocal music. Completion of this degree results in
in the student receiving Minnesota Teacher Licensure, Vocal Music K-12.

**Vocal K-12 Courses (22 cr)**
- MU 1411 - Diction: Italian and English (1.0 cr)
- MU 1421 - Piano Class I (1.0 cr)
- MU 1422 - Piano Class II (1.0 cr)
- MU 1440 - Survey of Instrumental Techniques (1.0 cr)
- MU 1441 - Vocal Techniques (1.0 cr)
- MU 2605 - Introduction to Music Education (1.0 cr)
- MU 3606 - Field Experience: Classroom Music Pre K-8 (1.0 cr)
- MU 3608 - Teaching Elementary Music I (2.0 cr)
- MU 3609 - Teaching Elementary Music II (2.0 cr)
- MU 3701 - Choral Conducting and Methods I (3.0 cr)
- MU 3702 - Choral Conducting and Methods II (3.0 cr)
- MU 3350 - Half-Recital (0.0 cr)
- MU 2110 - Jazz Theory (2.0 cr)
  or MU 3101 - Form and Analysis (2.0 cr)
  or MU 4103 - Contrapuntal Techniques (2.0 cr)
  or MU 5201 - Advanced Music History (2.0 cr)
- MU 1005 - Jazz Studies [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
  or MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
  or MU 2005 - African Roots of American Music [LE CAT9, LECD CAT09, FINE ARTS] (3.0 cr)

**Applied Instruction (18 cr)**
MU 0100 must be taken concurrently each semester with applied instruction in principal instrument.

**Voice, Principal Instrument**
- MU 1311 - Voice-Major (2.0 - 3.0 cr)
- MU 1322 - Piano-Non Major (1.0 cr)
- MU 4311 - Voice-Major (2.0 - 3.0 cr)
  or MU 3101 - Form and Analysis (2.0 cr)
  or MU 4103 - Contrapuntal Techniques (2.0 cr)
  or MU 5201 - Advanced Music History (2.0 cr)
- MU 1312 - Voice-Non Major (1.0 cr)
- MU 1321 - Piano-Major (2.0 - 3.0 cr)
- MU 4321 - Piano-Major (2.0 - 3.0 cr)
  or Keyboard, Principal Instrument
  Must pass advanced standing into voice. MU 1312 (total of 4 cr); MU 1321 (total of 8 cr); MU 4321 (total of 6 cr).
- MU 1312 - Voice-Non Major (1.0 cr)
- MU 1321 - Piano-Major (2.0 - 3.0 cr)
- MU 4321 - Piano-Major (2.0 - 3.0 cr)
  or Instrumental, Principal Instrument
  Must pass advanced standing into voice. MU 1312 for a total of 2 cr; MU 1322 for a total of 2 cr.
- MU 1312 - Voice-Non Major (1.0 cr)
- MU 1322 - Piano-Non Major (1.0 cr)
  Two credits of principal instrument each semester.
  - Take 8 or more credit(s) from the following:
    - MU 1xxx
  - Two credits of principal instrument each semester excluding the student teaching semester.
  - Take 6 or more credit(s) from the following:
    - MU 4xxx

**Ensemble Requirements (8 cr)**
Take 1 credit each semester excluding the student teaching semester.

- Take 4 or more credit(s) from the following:
  - MU 1510 - Concert Chorale [LE CAT10, FINE ARTS] (1.0 cr)
  - MU 1511 - University Singers [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)

**Ensemble - 4xxx**
- 1 credit each semester excluding the student teaching semester: MU 4510, MU 4511.
  - Take 3 or more credit(s) from the following:
    - MU 4510 - Concert Chorale (1.0 cr)
    - MU 4511 - University Singers (1.0 cr)
  - Take 1 or more course(s) from the following:
    - MU 3510 - Opera Studio (1.0 cr)
    - MU 4512 - Chamber Singers (1.0 cr)
    - MU 4513 - Vocal Jazz Ensemble (1.0 cr)

**Proficiency Exams**
Advanced piano proficiency; advanced proficiency in principal instrument.
- MU 250 - Advanced Piano Proficiency (0.0 cr)
- MU 300 - Advanced Standing Exam (0.0 cr)
Duluth Campus
Music Minor
School of Fine Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 25

The minor in music is designed to offer additional study to students with a background and interest in music.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Applied Instruction (4 cr)
Students must take MU 100 every semester in which they take applied instruction, to a total of 4 semesters.
MU 100 - Recital Hour (0.0 cr)
1 credit of a principal instrument each semester
Take 4 or more credit(s) from the following:
- MU 1xxx

Music Minor Courses (21 cr)
MU 1111 - Tonal Harmony I (3.0 cr)
MU 1122 - Ear-Training and Sight-Singing I (1.0 cr)
MU 1121 - Tonal Harmony II [LOGIC & QR] (3.0 cr)
MU 1201 - Music History I (3.0 cr)
MU 3201 - Music History II (3.0 cr)
Ensembles (4 cr)
Take 1 or more course(s) from the following:
- MU 1005 - Jazz Studies [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
- MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
- MU 2003 - Survey of American Music [LE CAT9, FINE ARTS, CDIVERSITY] (3.0 cr)
- MU 2005 - African Roots of American Music [LE CAT9, LECD CAT09, FINE ARTS] (3.0 cr)
**Duluth Campus**

**Performance B.Mus.**

**Music**  
**School of Fine Arts**

- **Program Type:** Baccalaureate  
- **Requirements for this program are current for Fall 2018**  
- **Required credits to graduate with this degree:** 120 to 122  
- **Required credits within the major:** 89 to 97  
- **Degree:** Bachelor of Music

The B.Mus. in performance is for students pursuing programs of intensive study to prepare for professional careers in music and/or acceptance into a graduate degree program. Students are assisted in acquiring high quality performance artistry and comprehensive and advanced historical and theoretical knowledge of musical styles, genres, and pedagogy.

Department Honors Requirements: Candidates, nominated by music department faculty, receive honors for distinguished achievement in musical performance, composition, or exceptional ability and accomplishment as a music educator.

**Program Delivery**

This program is available:  
- via classroom (the majority of instruction is face-to-face)

**Admission Requirements**

Freshman and transfer students students are usually admitted to pre-major status before admission to this major.

A GPA above 2.0 is preferred for the following:  
- 2.50 transferring from outside the University

Students must pass a performance audition to be accepted into any music degree program. At the time of the audition, students must also complete diagnostic examinations in theory, aural, and keyboard skills, and an interview with the department head or an appointed designee. Any student who receives provisional acceptance into a degree program must pass a review (usually at the end of the first semester) to receive full acceptance. That review includes recommendations of major instructors and successful completion of an applied jury.

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](https://admissions.umn.edu).

**General Requirements**

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the [Liberal Education Program](https://liberal.umn.edu).

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
1. Elective credits, other than those required in the major, may be taken from any UMD unit.

2. Courses with grades less than C- will not count toward the major.

Introductory Course (1 cr)
Music majors register for 1 credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Music Core (22 cr)
MU 100 - Recital Hour (0.0 cr)
MU 1111 - Tonal Harmony I (3.0 cr)
MU 1112 - Ear-Training and Sight-Singing I (1.0 cr)
MU 1121 - Tonal Harmony II [LOGIC & QR] (3.0 cr)
MU 1122 - Ear-Training II (1.0 cr)
MU 2111 - Tonal Harmony III (3.0 cr)
MU 2112 - Ear-Training III (1.0 cr)
MU 2121 - Tonal Harmony IV (3.0 cr)
MU 2122 - Ear-Training, Sight Singing and Improvisation (1.0 cr)
MU 3201 - Music History I (3.0 cr)
MU 3202 - Music History II (3.0 cr)

Advanced Writing (3 cr)
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)

SFA Additional Liberal Education Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the student's chosen major (Art, Art History, Dance, Fine Arts, or Theatre), provided that the student meets pre-requisites for the course(s). A 2-credit DN course may be substituted.

Proficiency Exam
Advanced proficiency in principal instrument
MU 300 - Advanced Standing Exam (0.0 cr)

Program Sub-plans
Students are required to complete one of the following sub-plans.

Band/Orchestral Instruments
The band/orchestral instruments emphasis prepares students for a career as a professional musician and for acceptance into a graduate degree program in music. The emphasis assists students in acquiring high quality performance artistry and provides students with advanced historical and theoretical knowledge of music.

Major Course Requirements (27 cr)
MU 3991 2 credits in one semester.
MU 4601 for a total of 2 credits.
Participation in MU 1505 or MU 4505 is strongly recommended in addition to the required ensembles.
MU 1421 - Piano Class I (1.0 cr)
MU 1422 - Piano Class II (1.0 cr)
MU 3300 - Junior Recital (1.0 cr)
MU 3705 - Instrumental Conducting I (1.0 cr)
MU 3706 - Instrumental Conducting II (1.0 cr)
MU 3991 - Independent Study (1.0 - 3.0 cr)
MU 4101 - Instrumental Arranging (2.0 cr)
MU 4300 - Senior Recital (1.0 cr)
MU 4601 - Applied Music Teaching (1.0 cr)
MU 5201 - Advanced Music History (2.0 cr)
MU 1005 - Jazz Studies [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
or MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
or MU 2005 - African Roots of American Music [LE CAT9, LECD CAT09, FINE ARTS] (3.0 cr)
MU 2110 - Jazz Theory (2.0 cr)
or MU 3101 - Form and Analysis (2.0 cr)
or MU 4103 - Contrapuntal Techniques (2.0 cr)
Take 4 or more credit(s) from the following:
• MU 1515 - Percussion Ensemble (1.0 cr)
• MU 1541 - Chamber Music (1.0 cr)
Take 4 or more credit(s) from the following:
• MU 4515 - Percussion Ensemble (1.0 cr)
• MU 4541 - Chamber Music (1.0 cr)

Applied Instruction (25 cr)
MU 0100 must be taken concurrently each semester with applied instruction in principal instrument.
Take 25 or more credit(s) from the following:

Applied Instruction - 13xx
2 credit first semester, 3 credits each subsequent semester.
Take 11 or more credit(s) from the following:
• MU 1xxx

Applied Instruction - 43xx
3 credits each semester.
Take 12 or more credit(s) from the following:
• MU 4xxx

Applied Instruction Secondary Instrument
Take 2 or more credit(s) from the following:
• MU 1322 - Piano-Non Major (1.0 cr)

Ensemble Requirements (8 cr)
Take 1 credit each semester.
Take 8 or more credit(s) from the following:
Take 4 or more credit(s) from the following:
• MU 1501 - Concert Band [LE CAT10, FINE ARTS] (1.0 cr)
• MU 1502 - Symphonic Wind Ensemble [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
• MU 1503 - Symphony Orchestra [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
• MU 1504 - Chamber Orchestra [LE CAT10, FINE ARTS] (1.0 cr)
Take 4 or more credit(s) from the following:
• MU 4501 - Concert Band (1.0 cr)
• MU 4502 - Symphonic Wind Ensemble (1.0 cr)
• MU 4503 - Symphony Orchestra (1.0 cr)
• MU 4504 - Chamber Orchestra (1.0 cr)

Keyboard
The keyboard emphasis prepares students for a career as a professional musician and for acceptance into graduate study in performance or accompanying and coaching. It assists students in acquiring high quality artistry as a performing keyboard musician both in solo and collaborative situations, and providing students with advanced historical and theoretical knowledge of diverse repertoire and styles. The emphasis also assists students in becoming effective piano teachers at all levels, ages, and group settings.

Major Course Requirements (26 cr)
MU 3300 - Junior Recital (1.0 cr)
MU 3627 - Art of Accompanying: Vocal Music (2.0 cr)
MU 3628 - Art of Accompanying: Instrumental Music (2.0 cr)
MU 4201 - Piano Literature (3.0 cr)
MU 4300 - Senior Recital (1.0 cr)
MU 4621 - Piano Pedagogy and Practicum I (2.0 cr)
MU 4622 - Piano Pedagogy and Practicum II (2.0 cr)
MU 4623 - Piano Techniques and Style (3.0 cr)
MU 5201 - Advanced Music History (2.0 cr)
MU 1005 - Jazz Studies [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
or MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
or MU 2005 - African Roots of American Music [LE CAT9, LECD CAT09, FINE ARTS] (3.0 cr)
Take 4 or more credit(s) from the following:
• MU 2110 - Jazz Theory (2.0 cr)
• MU 3101 - Form and Analysis (2.0 cr)
• MU 4103 - Contrapuntal Techniques (2.0 cr)
MU 3703 - Choral Conducting (1.0 cr)
or MU 3705 - Instrumental Conducting I (1.0 cr)

Applied Instruction Piano (23 cr)
MU 100 must be taken concurrently with applied piano each semester.
Take 23 or more credit(s) from the following:
2 credits first semester, 3 credits each subsequent semester.
Take 11 or more credit(s) from the following:
• MU 1321 - Piano-Major (2.0 - 3.0 cr)
• 3 credits each semester
Take 12 or more credit(s) from the following:

• MU 4321 - Piano-Major (2.0 - 3.0 cr)

Ensemble Requirements (12 cr)

Take a minimum of 1 credit each semester from the following:

Take 12 or more credit(s) from the following:

Take 4 or more credit(s) from the following:

• MU 1501 - Concert Band [LE CAT10, FINE ARTS] (1.0 cr)
• MU 1502 - Symphonic Wind Ensemble [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
• MU 1503 - Symphony Orchestra [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
• MU 1505 - Jazz Ensemble [LE CAT10, LECAT CAT10, FINE ARTS] (1.0 cr)
• MU 1510 - Concert Chorale [LE CAT10, FINE ARTS] (1.0 cr)
• MU 1511 - University Singers [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
• MU 1512 - Chamber Singers [LE CAT10, FINE ARTS] (1.0 cr)
• MU 1513 - Vocal Jazz Ensemble [LE CAT10, LECAT CAT10, FINE ARTS] (1.0 cr)

Take 4 or more credit(s) from the following:

• MU 4501 - Concert Band (1.0 cr)
• MU 4502 - Symphonic Wind Ensemble (1.0 cr)
• MU 4503 - Symphony Orchestra (1.0 cr)
• MU 4505 - Jazz Ensemble (1.0 cr)
• MU 4510 - Concert Chorale (1.0 cr)
• MU 4511 - University Singers (1.0 cr)
• MU 4512 - Chamber Singers (1.0 cr)
• MU 4513 - Vocal Jazz Ensemble (1.0 cr)

Additional Ensemble

Take 4 or more credit(s) from the following:

• MU 1504 - Chamber Orchestra [LE CAT10, FINE ARTS] (1.0 cr)
• MU 1515 - Percussion Ensemble (1.0 cr)
• MU 3510 - Opera Studio (1.0 cr)
• MU 4504 - Chamber Orchestra (1.0 cr)
• MU 4515 - Percussion Ensemble (1.0 cr)
• MU 4541 - Chamber Music (1.0 cr)

Vocal

The vocal emphasis prepares students for careers as professional classical singers or for acceptance into graduate degree programs.

Major Course Requirements (36 cr)

MU 1322 for a total of 2 credits, and MU 3510 for a total of 4 credits.

MU 1322 - Piano-Non Major (1.0 cr)

MU 1411 - Diction: Italian and English (1.0 cr)

MU 1412 - Diction: German (1.0 cr)

MU 1413 - Diction: French (1.0 cr)

MU 1421 - Piano Class I (1.0 cr)

MU 1422 - Piano Class II (1.0 cr)

MU 1441 - Vocal Techniques (1.0 cr)

MU 3211 - Art Song Literature (2.0 cr)

MU 3212 - Opera Literature (2.0 cr)

MU 3300 - Junior Recital (1.0 cr)

MU 3510 - Opera Studio (1.0 cr)

MU 3703 - Choral Conducting (1.0 cr)

MU 4300 - Senior Recital (1.0 cr)

MU 4600 - Vocal Pedagogy (1.0 cr)

MU 4601 - Applied Music Teaching (1.0 cr)

MU 5201 - Advanced Music History (2.0 cr)

Take 3 or more credit(s) from the following:

• MU 1005 - Jazz Studies [LE CAT9, LECAT CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)

• MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)

• MU 2005 - African Roots of American Music [LE CAT9, LECAT CAT09, FINE ARTS] (3.0 cr)

Take 4 or more credit(s) from the following:

• FR 1101 - Beginning French I [LE CAT3, COMM & LAN] (4.0 cr)

• FR 1102 - Beginning French II [LE CAT3, COMM & LAN] (4.0 cr)

• FR 1201 - Intermediate French I [LE CAT3, COMM & LAN] (4.0 cr)

• FR 1202 - Intermediate French II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)

• GER 1101 - Beginning German I [LE CAT3, COMM & LAN] (4.0 cr)

• GER 1102 - Beginning German II [LE CAT3, COMM & LAN] (4.0 cr)

• GER 1201 - Intermediate German I [LE CAT3, COMM & LAN] (4.0 cr)
• GER 1202 - Intermediate German II [LE CAT3, LEIP CAT03, COMM & LAN] (4.0 cr)
Take 2 or more credit(s) from the following:
  • MU 2110 - Jazz Theory (2.0 cr)
  • MU 3101 - Form and Analysis (2.0 cr)
  • MU 4103 - Counterpointal Techniques (2.0 cr)

Applied Instruction Voice (23 cr)
MU 0100 must be taken concurrently each semester with applied voice.
Take 23 or more credit(s) from the following:
  2 credit first semester, 3 credits each subsequent semester.
Take 11 or more credit(s) from the following:
  • MU 1311 - Voice-Major (2.0 - 3.0 cr)
  • 3 credits each semester.
Take 12 or more credit(s) from the following:
  • MU 4311 - Voice-Major (2.0 - 3.0 cr)

Ensemble Requirement (9 cr)
Take one credit each semester from the following:
Take 4 or more credit(s) from the following:
  • MU 1510 - Concert Chorale [LE CAT10, FINE ARTS] (1.0 cr)
  • MU 1511 - University Singers [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
Take 4 or more credit(s) from the following:
  • MU 4510 - Concert Chorale (1.0 cr)
  • MU 4511 - University Singers (1.0 cr)

Additional Ensemble
Take 1 or more credit(s) from the following:
  • MU 1510 - Concert Chorale [LE CAT10, FINE ARTS] (1.0 cr)
  • MU 1511 - University Singers [LE CAT10, LEIP CAT10, FINE ARTS] (1.0 cr)
  • MU 1512 - Chamber Singers [LE CAT10, FINE ARTS] (1.0 cr)
  • MU 1513 - Vocal Jazz Ensemble [LE CAT10, LECD CAT10, FINE ARTS] (1.0 cr)
  • MU 4510 - Concert Chorale (1.0 cr)
  • MU 4511 - University Singers (1.0 cr)
  • MU 4512 - Chamber Singers (1.0 cr)
  • MU 4513 - Vocal Jazz Ensemble (1.0 cr)
Duluth Campus
Photography Minor
UMD Art and Design, Dept of School of Fine Arts

• Program Type: Undergraduate free-standing minor
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 27

The photography minor provides experience with digital, film, and alternative photographic processes. Students learn the principles of design and composition and are introduced to theory and issues in visual communication and study the history of photography and visual communication.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

Minor Courses (21 cr)
ART 1013 - 2-D Digital Design (3.0 cr)
ART 1900 - Visual Literacy [LE CAT9, FINE ARTS] (3.0 cr)
ART 2600 - Photography I (3.0 cr)
ART 3600 - Photography: Alternative Processes (3.0 cr)
ART 4600 - Photography: Digital Portfolio (3.0 cr)
ART 4675 - Photography: The Photographic Book (3.0 cr)
ARTH 2620 - History of Photography (3.0 cr)

Electives (6 cr)
Take 1 or more course(s) totaling 6 or more credit(s) from the following:
• ART 3615 - Photography: Inventing with Light (3.0 cr)
• ART 4600 - Photography: Digital Portfolio (3.0 cr)
• ART 4650 - Alternative Processes Portfolio (3.0 cr)
Duluth Campus
Studio Art  B.F.A.
UMD Art and Design, Dept of
School of Fine Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 80 to 83
- Degree: Bachelor of Fine Arts

Studio art majors are encouraged to develop a strong personal creative direction in one or more of the studio areas housed within the department. Exploration and experimentation across a range of mediums is possible in an environment that fosters a cross-disciplined approach to form and image making. Traditional studio practices share equal footing with new and emerging technologies in an effort to best prepare the studio major for the field. Theoretical, historical, and conceptual foundations are provided through offerings in art history and seminars.

Students must select an emphasis in general studio, digital art and photography, painting, drawing and printmaking, or sculpture and ceramics.

Department Honors Requirements: Candidates, nominated by art and design department faculty, receive honors for distinguished achievement demonstrated in part by the senior student exhibition or a senior presentation or project. Students produce a body of work for the Senior Exhibition under the mentorship of faculty in their emphasis area. Work proposed for the solo or group senior exhibition will be reviewed and approved by studio faculty in their area during a Senior Portfolio Review.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students are admitted to pre-major status before admission to this major. To qualify for this program, pre-studio art students must pass a portfolio review (ART 0902) after completing a minimum of 9 art studio credits selected from the pre-studio core. Additionally, students must have a minimum 2.00 GPA overall and in art and design courses. The review is scheduled for both fall and spring semester and occurs approximately midway through the semester. Students must submit a portfolio of selected work derived from their art core courses. Portfolios are reviewed by the studio art faculty. Specific guidelines for preparation of the portfolio contents and dates for review will be distributed at the beginning of each semester.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
  UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Pre-Studio Core Requirements (12 cr)
Note: Studio Art Portfolio Review (ART 902) requires a 2.00 overall GPA and in art and art history courses.

Note: ART 1010, 1011, 1012, and 1013 may be taken either semester of the first year. They are not sequential.
  ART 902 - Studio Art Portfolio Review (0.0 cr)
  ART 1010 - Drawing I (3.0 cr)
  ART 1011 - 2-D Design (3.0 cr)
  ART 1012 - 3-D Design (3.0 cr)
  ART 1013 - 2-D Digital Design (3.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Emphasis in general studio, digital art and photography, painting, drawing and printmaking, or sculpture and ceramics.
2. Attendance at two visual lectures per semester (fall and spring).

SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (Dance, Fine Arts, Music, or Theatre), provided that the student meets pre-requisites for the course(s). MU 15xx ensembles must be repeated once each semester for a total of 3 credits (may require audition). A 2-credit DN course may be substituted (Art or Music students only).

Advanced Writing Requirement (3 cr)
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)
or WRIT 4230 - Web Design and Digital Culture (3.0 cr)
or WRIT 4250 - New Media Writing (3.0 cr)

Studio Art Required Courses (10 cr)
Seniors prepare and present a solo or joint exhibition in the Tweed Museum of Art while enrolled in ART 4899.
ART 1900 - Visual Literacy [LE CAT9, FINE ARTS] (3.0 cr)
ART 4812 - Senior Seminar (3.0 cr)
ART 4813 - Senior Seminar II: Studio Practice (3.0 cr)
ART 4899 - Senior Presentation/Exhibition (1.0 cr)

Program Sub-plans
Students are required to complete one of the following sub-plans.

Digital Art and Photography
51 credits within the sub-plan. Digital art and photography emphasis is for students seeking a focused course of study in contemporary digital art and in traditional and digital photography.

Emphasis Courses (15 cr)
ART 2016 - Digital Arts: Mixed-Media Studio (3.0 cr)
ART 2030 - Digital Arts: Time-based Media (3.0 cr)
ART 2040 - Digital Filmmaking: Visual Narratives (3.0 cr)
ART 2600 - Photography I (3.0 cr)
ART 3600 - Photography: Alternative Processes (3.0 cr)
or ART 4600 - Photography: Digital Portfolio (3.0 cr)

Studio Electives (9 cr)
Select courses from outside the emphasis area.
Take 9 or more credit(s) from the following:
•ART 2xxx

Upper Level Studio Electives (15 cr)
Take 15 or more credit(s) from the following:
•ART 2044 - 3-D Digital Studio I (3.0 cr)
•ART 2045 - Digital Arts: Interactive Media (3.0 cr)
•ART 2907 - Typography I (3.0 cr)
•ART 3031 - Digital Arts: Installation and Collaborative Media (3.0 cr)
• ART 3040 - Digital Filmmaking: Experimental Techniques (3.0 cr)
• ART 3214 - Sculpture II: Robotics and Physical Computing (3.0 cr)
• ART 3615 - Photography: Inventing with Light (3.0 cr)
• ART 4016 - Digital Arts: Advanced Projects (3.0 cr)
• ART 4040 - Digital Filmmaking: Advanced Projects (3.0 cr)
• ART 4091 - Individual Study in Electronic Arts (1.0 - 3.0 cr)
• ART 4600 - Photography: Digital Portfolio (3.0 cr)
• ART 4650 - Alternative Processes Portfolio (3.0 cr)
• ART 4675 - Photography: The Photographic Book (3.0 cr)
• ART 4691 - Individual Study in Photography (1.0 - 3.0 cr)
• ART 4793 - Intermedia Studio (1.0 - 3.0 cr)

Art History Requirements (9 cr)
ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
ARTH 2620 - History of Photography (3.0 cr)
ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
or ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)

Art History Electives (3 cr)
Take 3 or more credit(s) from the following:
• ARTH 2390 - US Art and Visual Culture in the 20th Century [LE CAT9, LECD CAT09, HUMANITIES, CDIVERSITY] (3.0 cr)
• ARTH 2901 - History of Graphic Design (3.0 cr)
• ARTH 3130 - Modern and Contemporary Mexican Art (3.0 cr)
• ARTH 3140 - Women in Art/Visual Culture in Latin America (3.0 cr)
• ARTH 3150 - Contemporary Global Exhibition (3.0 cr)
• TH 2851 - Film History (3.0 cr)

General Studio
54 credits within sub-plan. General studio emphasis is for students seeking a broad yet intensive course of study in traditional studio art and contemporary digital art discipline.

Emphasis Courses (6 cr)
• ART 3700 - Drawing II (3.0 cr)
• ART 4700 - Drawing III (3.0 cr)

Studio Electives (18 cr)
Take 6 or more course(s) totaling 18 or more credit(s) from the following:
• ART 2014 - 3-D Digital Studio I (3.0 cr)
• ART 2016 - Digital Arts: Mixed-Media Studio (3.0 cr)
• ART 2018 - Digital Arts: Interactive Media (3.0 cr)
• ART 2050 - Digital Arts: Time-based Media (3.0 cr)
• ART 2100 - Painting I (3.0 cr)
• ART 2200 - Sculpture I (3.0 cr)
• ART 2400 - Ceramics I (3.0 cr)
• ART 2500 - Jewelry and Metals I (3.0 cr)
• ART 2600 - Photography I (3.0 cr)
• ART 2300 - Printmaking I: Intaglio, Relief (3.0 cr)
or ART 2301 - Printmaking I: Litho, Screen (3.0 cr)

Art Electives (6 cr)
Take 6 or more credit(s) from the following:
• ART 1xxx
• ART 2xxx
• ART 3xxx
• ART 4xxx
• ART 5xxx

Additional Studio Electives (12 cr)
Courses taken to fulfill other major requirements may not be used to fulfill this requirement.
Take 12 or more credit(s) from the following:
• ART 3xxx
• ART 4xxx

Art History (9 cr)
ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
ARTH 2300 - The City as a Work of Art [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
or ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)

ArtH Electives (3 cr)
Take 3 or more credit(s) from the following:
• ARTH 1xxx
Painting, Drawing and Printmaking
51 credits within the sub-plan. Painting, drawing, and printmaking emphasis is for students seeking a focused course of study in the two-dimensional disciplines of painting, drawing, and printmaking.

**Emphasis Courses (24 cr)**
- ART 2100 - Painting I (3.0 cr)
- ART 2300 - Printmaking I: Intaglio, Relief (3.0 cr)
- ART 2301 - Printmaking I: Litho, Screen (3.0 cr)
- ART 3100 - Painting II (3.0 cr)
- ART 3300 - Printmaking II (3.0 cr)
- ART 3700 - Drawing II (3.0 cr)
- ART 3715 - Figure Drawing (3.0 cr)
  or ART 4700 - Drawing III (3.0 cr)

**Studio Electives (9 cr)**
Take 9 credits selected from courses outside the Emphasis area:

**Take 9 or more credit(s) from the following:**
- ART 2xxx

**Upper Level Studio Electives (6 cr)**
Courses in painting, drawing, or printmaking or ART 5793 Intermedia Studio Problems

**Take 2 or more course(s) totaling 6 or more credit(s) from the following:**
- ART 3xxx
- ART 4xxx

**Art History Requirements (9 cr)**
- ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
- ARTH 2390 - US Art and Visual Culture in the 20th Century [LE CAT9, LECD CAT09, HUMANITIES, CDIVERSITY] (3.0 cr)
- ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
  or ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)

**Art History Electives (3 cr)**
Take 3 or more credit(s) from the following:
- ARTH 2xxx
- ARTH 3xxx
- ARTH 4xxx

Sculpture and Ceramics
51 credits within the sub-plan. Sculpture and ceramics emphasis is for students seeking a focused course of study in the threedimensional disciplines of sculpture and ceramics. Traditional and contemporary digital course work are included in the emphasis.

**Emphasis Courses (15 cr)**
- ART 2014 - 3-D Digital Studio I (3.0 cr)
- ART 2200 - Sculpture I (3.0 cr)
- ART 2400 - Ceramics I (3.0 cr)
- ART 3200 - Sculpture II (3.0 cr)
- ART 3400 - Ceramics II (3.0 cr)

**Studio Electives (9 cr)**
Select courses from outside the emphasis area.

**Take 9 or more credit(s) from the following:**
- ART 2xxx

**Upper Level Studio Electives (9 cr)**
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
- ART 3214 - Sculpture II: Robotics and Physical Computing (3.0 cr)
- ART 3425 - Ceramics II Wheel Throwing (3.0 cr)
- ART 4200 - Sculpture III (3.0 cr)
- ART 4400 - Ceramics III (3.0 cr)
- ART 4291 - Individual Study in Sculpture (1.0 - 3.0 cr)
- ART 4491 - Individual Study in Ceramics (1.0 - 3.0 cr)

**Art History Requirements (9 cr)**
- ARTH 1304 - History of World Art II [LE CAT9, LEIP CAT09, HUMANITIES] (3.0 cr)
- ARTH 2390 - US Art and Visual Culture in the 20th Century [LE CAT9, LECD CAT09, HUMANITIES, CDIVERSITY] (3.0 cr)
- ARTH 1303 - History of World Art I [LE CAT9, HUMANITIES, GLOBAL PER] (3.0 cr)
or ARTH 1305 - Survey of Non-Western Art [HUMANITIES, GLOBAL PER] (3.0 cr)

Art History Electives (3 cr)
Take 3 or more credit(s) from the following:
• ARTH 2xxx
• ARTH 3xxx
• ARTH 4xxx

Additional Electives (6 cr)
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
• ART 1814 - Creating Across Cultures [LE CAT9, LECD CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
• ART 3xxx
• ART 4xxx
Duluth Campus
Theatre B.A.
Theatre
School of Fine Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 65
• Degree: Bachelor of Arts

The BA in theatre offers broad, liberal arts study in theatre arts complemented by courses from across the University curriculum. Required courses in the major give students a strong core of theatre knowledge and experience. Students are urged to broaden their study by selecting a minor or second major in literature, culture, language, the social sciences, or the arts as appropriate to their career goals and in consultation with their academic advisor.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
Minor or a second major in another field of study.

Introductory Course (1 cr)
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Core Courses (34 cr)
TH 1031 - Introduction to Theatrical Design (3.0 cr)
TH 1301 - Stagecraft (5.0 cr)
TH 1401 - Costume Construction I (5.0 cr)
TH 1599 - Lighting/Sound Practicum (1.0 cr)
TH 1699 - Running Crew Practicum (2.0 cr)
TH 1801 - Elements of Theatre (3.0 cr)
TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
TH 3201 - Stage Direction (3.0 cr)
TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
TH 4802 - History of the Theatre II (3.0 cr)
TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
   or TH 1112 - Acting I (3.0 cr)

BA Requirements (9 cr)
TH 2399 - Production Practicum II (1.0 cr)
TH 2841 - The Theatre Experience (3.0 cr)
TH 3399 - Production Practicum III (2.0 cr)
TH 4841 - Creative Collaboration (3.0 cr)

Theatre Electives (15 cr)
Take 15 or more credit(s) from the following:
• TH 1071 - Musical Theatre History [LE CAT9, HUMANITIES] (3.0 cr)
• TH 1116 - Audition Techniques I (2.0 cr)
• TH 1118 - Voice and Movement for the Actor (3.0 cr)
• TH 1351 - Stage Rendering Techniques (3.0 cr)
• TH 1451 - Stage Makeup (3.0 cr)
• TH 1551 - Sound Design (3.0 cr)
• TH 1601 - Stage Management (3.0 cr)
• TH 2400 - Survey of the History of Costume (3.0 cr)
• TH 3111 - Introduction to Scene Study (3.0 cr)
• TH 3112 - Acting IV: Improvisation (3.0 cr)
• TH 3171 - Acting V: Character/Masks (3.0 cr)
• TH 3201 - Stagecraft II (3.0 cr)
• TH 3331 - Scenic Design I (3.0 cr)
• TH 3341 - Properties Construction (3.0 cr)
• TH 3371 - Scene Painting (3.0 cr)
• TH 3871 - Playwriting [LE CAT9, FINE ARTS] (3.0 cr)
• TH 3995 - Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)

Advanced Writing (3 cr)
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)

SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (art, art history, dance, music, or fine arts), provided that the student meets pre-requisites for the course(s). MU 15xx ensembles must be repeated once each semester for a total of 3 credits (may require audition).
Duluth Campus
Theatre B.F.A.
Theatre
School of Fine Arts

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120 to 122
• Required credits within the major: 81 to 93
• Degree: Bachelor of Fine Arts

The Department of Theatre, housed in the Marshall Performing Arts Center, has three objectives: to teach, produce, and sponsor theatre. The department provides academic and professional training in the arts of the theatre: acting, singing, directing, playwriting, critical evaluation, dance, scenic design, lighting design, sound, costume design, properties, stage management, theatre history and theory, and theatre management, as well as a broad liberal arts study.

The co-curricular producing arm of the department, UMD Theatre, provides practical experience for University students while enhancing the cultural life of the University and the communities it serves. Auditions for all theatre productions are open to any student currently enrolled at UMD. Productions range from classical to contemporary, comedy to tragedy, and musical theatre to experimental. Modern, jazz, tap, and classical dance are offered in academics, as well as in the production season.

The department sponsors performances and residencies by a variety of theatre artists. Recent visitors have included world-class performing artists, directors, choreographers, designers, and dance companies.

Department Honors Requirements: Honors are awarded to graduating theatre majors for exceptional achievement. Candidates, nominated by theatre department faculty, receive honors for distinguished contribution in acting, musical theatre, design and technology, stage management, general theatre involvement, and leadership.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
In addition to being admitted to UMD through the standard Admissions process, applicants interested in UMDs Theatre BFA program must complete an in-person audition or portfolio review with UMD Theatre faculty. Please see the Department of Theatres Prospective Students web page for complete details about audition/interview dates and preparatory requirements.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements

Introductory Course (1 cr)
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Advanced Writing (3 cr)
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)

SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (Art, Art History, Dance, Music, or Fine Arts), provided that the student meets pre-requisites for the course(s). MU 15xx ensembles must be repeated once each semester for a total of 3 credits (may require audition).

Program Sub-plans

Students are required to complete one of the following sub-plans.

Acting
The BFA in Theatre with acting emphasis (74 credits) is for students seeking professional training or an intensive course of study and practical application in the area of acting.

BFA Theatre Core Courses - Acting (34 cr)
BFA Theatre students must enroll in a TH practicum (TH courses ending in "99") each semester except when enrolled in TH 1301 or 1401. Any TH practicum course is acceptable (1-6 cr).
TH 1031 - Introduction to Theatrical Design (3.0 cr)
TH 1301 - Stagecraft (5.0 cr)
TH 1401 - Costume Construction I (5.0 cr)
TH 1599 - Lighting/Sound Practicum (1.0 cr)
TH 1699 - Running Crew Practicum (2.0 cr)
TH 1801 - Elements of Theatre (3.0 cr)
TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
TH 3201 - Stage Direction (3.0 cr)
TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
TH 4802 - History of the Theatre II (3.0 cr)
TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
or TH 1112 - Acting I (3.0 cr)

Acting Emphasis Courses (40 cr)
DN 1101 - Modern Dance Technique I [LE CAT10, FINE ARTS] (2.0 cr)
TH 1116 - Audition Techniques I (2.0 cr)
TH 1118 - Voice and Movement for the Actor (3.0 cr)
TH 1451 - Stage Makeup (3.0 cr)
TH 2112 - Acting II: American Realism (3.0 cr)
TH 2113 - Acting III: Shakespeare (3.0 cr)
TH 2118 - Speech for the Actor (3.0 cr)
TH 2119 - Stage Dialects (3.0 cr)
TH 3112 - Acting IV: Improvisation (3.0 cr)
TH 3118 - Voice Release (1.0 cr)
TH 3161 - Stage Combat/Circus (3.0 cr)
TH 3218 - Acting V: Physical Theatre (2.0 cr)
TH 4112 - Acting VI: Scene Study (3.0 cr)
TH 4113 - Acting VII: Period Styles (2.0 cr)
TH 4116 - Audition Techniques II (1.0 cr)
TH 4171 - Acting VIII: Acting for the Camera (3.0 cr)

Composite
The BFA in Theatre with composite emphasis (75 credits) is for students seeking professional training or an intensive course of study with a composite emphasis.

BFA Theatre Core Courses - Composite (34 cr)
BFA Theatre students must enroll in a TH practicum (TH course ending in "99") each semester except when enrolled in TH 1301 or 1401. Any TH practicum course is acceptable (1-6 cr).
TH 1031 - Introduction to Theatrical Design (3.0 cr)
TH 1301 - Stagecraft (5.0 cr)
TH 1401 - Costume Construction I (5.0 cr)
TH 1599 - Lighting/Sound Practicum (1.0 cr)
TH 1699 - Running Crew Practicum (2.0 cr)
TH 1801 - Elements of Theatre (3.0 cr)
TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
TH 3201 - Stage Direction (3.0 cr)
TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
TH 4802 - History of the Theatre II (3.0 cr)
TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
or TH 1112 - Acting I (3.0 cr)

Composite Emphasis Courses (41 cr)
TH 3699 - Production Management (2.0 cr)

Theatre Electives (21 cr) - Theatre courses that support a theatre emphasis unavailable within the parameters of the acting, musical theatre, design/technical, or stage management emphases and approved by the composite adviser and the theatre faculty. At least 10 credits must be in upper division courses.

Electives (18 cr) - Courses outside the department that clearly support the student's declared composite emphasis and are approved by the composite advisor and theatre faculty.

Costume Design
The BFA in Theatre with costume design emphasis (75 credits) is for students seeking professional training or an intensive course of study and practical application in the area of costume design.

BFA Theatre Core Courses - Costume Design (34 cr)
BFA Theatre students must enroll in a TH practicum (TH courses ending in "99") each semester except when enrolled in TH 1301 or 1401. Any TH practicum course is acceptable (1 - 6 cr).
TH 1031 - Introduction to Theatrical Design (3.0 cr)
TH 1301 - Stagecraft (5.0 cr)
TH 1401 - Costume Construction I (5.0 cr)
TH 1599 - Lighting/Sound Practicum (1.0 cr)
TH 1699 - Running Crew Practicum (2.0 cr)
TH 1801 - Elements of Theatre (3.0 cr)
TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
TH 3201 - Stage Direction (3.0 cr)
TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
TH 4802 - History of the Theatre II (3.0 cr)
TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
or TH 1112 - Acting I (3.0 cr)

Design/Tech Core Requirements (23 cr)
TH 2399 must be repeated for 2 credits and TH 3399 must be repeated for 4 credits.
TH 1351 - Stage Rendering Techniques (3.0 cr)
TH 2399 - Production Practicum II (1.0 cr)
TH 3331 - Scenic Design I (3.0 cr)
TH 3351 - Theatrical Drafting (3.0 cr)
TH 3399 - Production Practicum III (2.0 cr)
TH 4341 - Costume Design I (3.0 cr)
TH 4351 - Portfolio Preparation and Presentation (3.0 cr)
TH 4399 - Theatre: Special Projects (2.0 cr)

Costume Design Emphasis Requirements (15 cr)
ART 1010 - Drawing I (3.0 cr)
TH 1451 - Stage Makeup (3.0 cr)
TH 2400 - Survey of the History of Costume (3.0 cr)
TH 3401 - Costume Construction II (3.0 cr)
TH 4441 - Costume Design II (3.0 cr)

Costume Design Emphasis Electives (3 cr)
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
• TH 4331 - Scenic Design II (3.0 cr)
• TH 4501 - Advanced Stage Lighting (3.0 cr)

Design and Production
The BFA in Theatre with design and production emphasis (75 credits) is for students seeking professional training or an intensive course of study and practical application in the area of design and production.

BFA Theatre Core Courses - Design and Production (34 cr)
BFA Theatre students must enroll in a TH practicum (TH course ending in "99") each semester except when enrolled in TH 1301 or 1401. Any TH practicum course is acceptable (1-6 cr).

**TH 1031 - Introduction to Theatrical Design (3.0 cr)**

**TH 1301 - Stagecraft (5.0 cr)**

**TH 1401 - Costume Construction I (5.0 cr)**

**TH 1599 - Lighting/Sound Practicum (1.0 cr)**

**TH 1699 - Running Crew Practicum (2.0 cr)**

**TH 1801 - Elements of Theatre (3.0 cr)**

**TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)**

**TH 3201 - Stage Direction (3.0 cr)**

**TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)**

**TH 4802 - History of the Theatre II (3.0 cr)**

**TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)**

*or TH 1112 - Acting I (3.0 cr)*

**Design/Tech Core Requirements (23 cr)**

TH 2399 must be repeated for 2 credits and TH 3399 must be repeated for 4 credits.

**TH 1351 - Stage Rendering Techniques (3.0 cr)**

**TH 2399 - Production Practicum II (1.0 cr)**

**TH 3331 - Scenic Design I (3.0 cr)**

**TH 3351 - Theatrical Drafting (3.0 cr)**

**TH 3399 - Production Practicum III (2.0 cr)**

**TH 3441 - Costume Design I (3.0 cr)**

**TH 4351 - Portfolio Preparation and Presentation (3.0 cr)**

**TH 4399 - Theatre: Special Projects (2.0 cr)**

**Design and Production Emphasis Electives Group 1 (12 cr)**

Take 4 or more course(s) totaling 12 or more credit(s) from the following:

- **TH 1451 - Stage Makeup (3.0 cr)**
- **TH 1551 - Sound Design (3.0 cr)**
- **TH 1601 - Stage Management (3.0 cr)**
- **TH 2400 - Survey of the History of Costume (3.0 cr)**
- **TH 3301 - Stagecraft II (3.0 cr)**
- **TH 3352 - Stage Rendering Techniques II (3.0 cr)**
- **TH 3355 - Computer-Aided Theatrical Design (3.0 cr)**
- **TH 3371 - Scene Painting (3.0 cr)**
- **TH 3375 - Mechanical Design for Stage (3.0 cr)**
- **TH 3401 - Costume Construction II (3.0 cr)**
- **TH 3501 - Advanced Digital Technology for the Theatre (3.0 cr)**

**Design and Production Emphasis Electives Group 2 (6 cr)**

Take 2 or more course(s) totaling 6 or more credit(s) from the following:

- **TH 4331 - Scenic Design II (3.0 cr)**
- **TH 4441 - Costume Design II (3.0 cr)**
- **TH 4501 - Advanced Stage Lighting (3.0 cr)**

**Lighting Design**

The BFA in Theatre with lighting design emphasis (75 credits) is for students seeking professional training or an intensive course of study and practical application in the area of lighting design.

**BFA Theatre Core Courses - Lighting Design (34 cr)**

BFA Theatre students must enroll in a TH practicum (TH course ending in "99") each semester except when enrolled in TH 1301 or 1401. Any TH practicum course is acceptable (1 - 6 cr).

**TH 1031 - Introduction to Theatrical Design (3.0 cr)**

**TH 1301 - Stagecraft (5.0 cr)**

**TH 1401 - Costume Construction I (5.0 cr)**

**TH 1599 - Lighting/Sound Practicum (1.0 cr)**

**TH 1699 - Running Crew Practicum (2.0 cr)**

**TH 1801 - Elements of Theatre (3.0 cr)**

**TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)**

**TH 3201 - Stage Direction (3.0 cr)**

**TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)**

**TH 4802 - History of the Theatre II (3.0 cr)**

*or TH 1112 - Acting I (3.0 cr)*

**Design/Tech Core Requirements (23 cr)**

TH 2399 must be repeated for 2 credits and TH 3399 must be repeated for 4 credits.

**TH 1351 - Stage Rendering Techniques (3.0 cr)**
TH 2399 - Production Practicum II (1.0 cr)
TH 3331 - Scenic Design I (3.0 cr)
TH 3351 - Theatrical Drafting (3.0 cr)
TH 3399 - Production Practicum III (2.0 cr)
TH 4411 - Costume Design I (3.0 cr)
TH 4451 - Portfolio Preparation and Presentation (3.0 cr)
TH 4499 - Theatre: Special Projects (2.0 cr)

Lighting Design Emphasis Requirements (15 cr)
CS 1121 - Introduction to Programming in Visual BASIC.NET [LE CAT3, LOGIC & QR] (3.0 cr)
TH 1551 - Sound Design (3.0 cr)
TH 3355 - Computer-Aided Theatrical Design (3.0 cr)
TH 3501 - Advanced Digital Technology for the Theatre (3.0 cr)
TH 4501 - Advanced Stage Lighting (3.0 cr)

Lighting Design Emphasis Electives (3 cr)
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
- TH 4331 - Scenic Design II (3.0 cr)
- TH 4441 - Costume Design II (3.0 cr)

Musical Theatre
The BFA in Theatre with musical theatre emphasis (86 credits) is for students seeking professional training or an intensive course of study and practical application in the area of musical theatre.

BFA Theatre Core Courses - Musical Theatre (34 cr)
BFA Theatre students must enroll in a TH practicum (TH course ending in "99") each semester except when enrolled in TH 1301 or TH 1401. Any TH practicum course is acceptable (1-6 cr).
TH 1031 - Introduction to Theatrical Design (3.0 cr)
TH 1301 - Stagecraft (5.0 cr)
TH 1401 - Costume Construction I (5.0 cr)
TH 1599 - Lighting/Sound Practicum (1.0 cr)
TH 1699 - Running Crew Practicum (2.0 cr)
TH 1801 - Elements of Theatre (3.0 cr)
TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
TH 3201 - Stage Direction (3.0 cr)
TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
TH 4802 - History of the Theatre II (3.0 cr)
TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)

Musical Theatre Emphasis Courses (52 cr)
DN 2111 - Jazz Dance Techniques II (2.0 cr)
DN 2131 - Ballet Technique II (2.0 cr)
DN 3211 - Jazz Dance Technique III (2.0 cr)
DN 3221 - Tap Dance Technique II (2.0 cr)
DN 3231 - Ballet Technique III (2.0 cr)
DN 3241 - Social Dance for the Stage (1.0 cr)
DN 4116 - Musical Theatre Audition Techniques (3.0 cr)
MU 1322 - Piano-Non Major (1.0 cr)
TH 1071 - Musical Theatre History [LE CAT9, HUMANITIES] (3.0 cr)
TH 1114 - Music Theory and Sight Singing for the Musical Theatre Performer (3.0 cr)
TH 1116 - Audition Techniques I (2.0 cr)
TH 1118 - Voice and Movement for the Actor (3.0 cr)
TH 1312 - Musical Theatre Voice Lessons (1.0 cr)
TH 1451 - Stage Makeup (3.0 cr)
TH 2112 - Acting II: American Realism (3.0 cr)
TH 2113 - Acting III: Shakespeare (3.0 cr)
TH 2114 - Acting: Musical Theatre (3.0 cr)
TH 2115 - Musical Theatre Singing II: The Modes (1.0 cr)
TH 2118 - Speech for the Actor (3.0 cr)
TH 3112 - Acting IV: Improvisation (3.0 cr)
TH 3114 - Musical Theatre Repertoire (1.0 cr)
TH 3115 - Musical Theatre Singing III (1.0 cr)
TH 4113 - Acting VII: Period Styles (2.0 cr)
TH 4115 - Musical Theatre Singing IV: Transition Into the Profession (1.0 cr)
TH 4116 - Audition Techniques II (1.0 cr)

Scene Design
The BFA in Theatre with scene design emphasis (75 credits) is for students seeking professional training or an intensive course of study and practical application in the area of scene design.

**BFA Theatre Core Courses - Scene Design (34 cr)**
BFA students must enroll in a TH practicum (TH courses ending in "99") each semester except when enrolled in TH 1301 or 1401. Any TH practicum course is acceptable (1-6 cr).
- TH 1031 - Introduction to Theatrical Design (3.0 cr)
- TH 1301 - Stagecraft (5.0 cr)
- TH 1401 - Costume Construction I (5.0 cr)
- TH 1599 - Lighting/Sound Practicum (1.0 cr)
- TH 1699 - Running Crew Practicum (2.0 cr)
- TH 1801 - Elements of Theatre (3.0 cr)
- TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
- TH 3201 - Stage Direction (3.0 cr)
- TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
- TH 4802 - History of the Theatre II (3.0 cr)
- TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
  or TH 1112 - Acting I (3.0 cr)

**Design/Tech Core Requirements (23 cr)**
- TH 2399 must be repeated for 2 credits and TH 3399 must be repeated for 4 credits.
- TH 1351 - Stage Rendering Techniques (3.0 cr)
- TH 2399 - Production Practicum II (1.0 cr)
- TH 3351 - Scenic Design I (3.0 cr)
- TH 3351 - Theatrical Drafting (3.0 cr)
- TH 3441 - Costume Design I (3.0 cr)
- TH 3399 - Production Practicum III (2.0 cr)
- TH 4351 - Portfolio Preparation and Presentation (3.0 cr)
- TH 4399 - Theatre: Special Projects (2.0 cr)

**Scene Design Emphasis Requirements (15 cr)**
- ART 1010 - Drawing I (3.0 cr)
- TH 3352 - Stage Rendering Techniques II (3.0 cr)
- TH 3355 - Computer-Aided Theatrical Design (3.0 cr)
- TH 3371 - Scene Painting (3.0 cr)
- TH 4331 - Scenic Design II (3.0 cr)

**Scene Design Emphasis Electives (3 cr)**
- Take 1 or more course(s) totaling 3 or more credit(s) from the following:
  - TH 4441 - Costume Design II (3.0 cr)
  - TH 4501 - Advanced Stage Lighting (3.0 cr)

**Stage Management**
The BFA in Theatre with stage management emphasis (75 credits) is for students seeking professional training or an intensive course of study and practical application in the area of stage management.

**BFA Theatre Core Courses - Stage Management (34 cr)**
BFA Theatre students must enroll in a TH practicum (TH course ending in "99") each semester except when enrolled in TH 1301 or 1401. Any TH practicum course is acceptable (1-6 cr).
- TH 1031 - Introduction to Theatrical Design (3.0 cr)
- TH 1301 - Stagecraft (5.0 cr)
- TH 1401 - Costume Construction I (5.0 cr)
- TH 1599 - Lighting/Sound Practicum (1.0 cr)
- TH 1699 - Running Crew Practicum (2.0 cr)
- TH 1801 - Elements of Theatre (3.0 cr)
- TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
- TH 3201 - Stage Direction (3.0 cr)
- TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
- TH 4802 - History of the Theatre II (3.0 cr)
- TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
  or TH 1112 - Acting I (3.0 cr)

**Stage Management Emphasis Requirements (20 cr)**
- TH 3399 and TH 3699 must be repeated for 4 credits each.
- COMM 1222 - Interpersonal Communication [LE CAT3, LEC0 CAT03, COMM & LAN] (3.0 cr)
- HLTH 1700 - First Responder (3.0 cr)
- TH 1801 - Elements of Theatre (3.0 cr)
- TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
- TH 3201 - Stage Direction (3.0 cr)
- TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
- TH 4802 - History of the Theatre II (3.0 cr)
- TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
  or TH 1112 - Acting I (3.0 cr)

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TH 4351 - Portfolio Preparation and Presentation (3.0 cr)

Stage Management Emphasis Electives (21 cr)
Take 21 or more credit(s) from the following:
- COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
- COMM 3116 - Professional Communication (3.0 cr)
- COMM 3210 - Group Communication (3.0 cr)
- COMM 3215 - Conflict Management (3.0 cr)
- HLTH 1470 - Human Nutrition [LE CAT5, NAT SCI] (3.0 cr)
- TH 1451 - Stage Makeup (3.0 cr)
- TH 1551 - Sound Design (3.0 cr)
- TH 3331 - Scenic Design I (3.0 cr)
- TH 3351 - Theatrical Drafting (3.0 cr)
- TH 3371 - Scene Painting (3.0 cr)
- TH 3871 - Playwriting [LE CAT9, FINE ARTS] (3.0 cr)
- TH 3881 - New Play Development Workshop (3.0 cr)
- TH 5997 - Internship in Professional Theatre (1.0 - 12.0 cr)

Technical Theatre
The BFA in Theatre with technical theatre emphasis (75 credits) is for students seeking professional training or an intensive course of study and practical application in the area of technical theatre.

BFA Theatre Core Courses - Technical Theatre (34 cr)
BFA Theatre students must enroll in a TH practicum (TH course ending in "99") each semester except when enrolled in TH 1301 or 1401. Any TH practicum course is acceptable (1 - 6 cr).
- TH 1031 - Introduction to Theatrical Design (3.0 cr)
- TH 1301 - Stagecraft (5.0 cr)
- TH 1401 - Costume Construction I (5.0 cr)
- TH 1599 - Lighting/Sound Practicum (1.0 cr)
- TH 1699 - Running Crew Practicum (2.0 cr)
- TH 1801 - Elements of Theatre (3.0 cr)
- TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
- TH 3201 - Stage Direction (3.0 cr)
- TH 4801 - History of the Theatre I [HUMANITIES] (3.0 cr)
- TH 4802 - History of the Theatre II (3.0 cr)
- TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
  or TH 1112 - Acting I (3.0 cr)

Design/Tech Core Requirements (23 cr)
TH 2399 must be repeated for 2 credits and TH 3399 must be repeated for 4 credits.
- TH 1351 - Stage Rendering Techniques (3.0 cr)
- TH 2399 - Production Practicum II (1.0 cr)
- TH 3331 - Scenic Design I (3.0 cr)
- TH 3351 - Theatrical Drafting (3.0 cr)
- TH 3399 - Production Practicum III (2.0 cr)
- TH 3441 - Costume Design I (3.0 cr)
- TH 4351 - Portfolio Preparation and Presentation (3.0 cr)
- TH 4399 - Theatre: Special Projects (2.0 cr)

Technical Theatre Emphasis Requirements (15 cr)
- PHYS 1011 - Conceptual Physics [LE CAT5, NAT SCI] (3.0 cr)
- TH 3301 - Stagecraft II (3.0 cr)
- TH 3355 - Computer-Aided Theatrical Design (3.0 cr)
- TH 3375 - Mechanical Design for Stage (3.0 cr)
- TH 3501 - Advanced Digital Technology for the Theatre (3.0 cr)

Technical Theatre Emphasis Electives (3 cr)
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
- TH 4331 - Scenic Design II (3.0 cr)
- TH 4441 - Costume Design II (3.0 cr)
- TH 4501 - Advanced Stage Lighting (3.0 cr)
Duluth Campus
Theatre Minor
School of Fine Arts

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 26

The theatre minor is for students who want to pursue an interest in theatre that will complement their major program.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Theatre minors should confer with a minor adviser from the Department of Theatre to develop a sound schedule for taking courses to complete the minor in less than four years. Students are advised to note prerequisites and to take courses in proper sequence.

Theatre Minor Courses (26 cr)

TH 1001 - Introduction to Theatre Arts [LE CAT9, FINE ARTS] (3.0 cr)
TH 1031 - Introduction to Theatrical Design (3.0 cr)
TH 1111 - Introduction to Acting [LE CAT10, FINE ARTS] (3.0 cr)
TH 1301 - Stagecraft (5.0 cr)
TH 1401 - Costume Construction I (5.0 cr)
TH 1599 - Lighting/Sound Practicum (1.0 cr)

Take 2 or more course(s) from the following:
• TH 1351 - Stage Rendering Techniques (3.0 cr)
• TH 1451 - Stage Makeup (3.0 cr)
• TH 1551 - Sound Design (3.0 cr)
• TH 1601 - Stage Management (3.0 cr)
• TH 2400 - Survey of the History of Costume (3.0 cr)
• TH 2801 - Play Analysis: Dramatic Theory and Theatre Research (3.0 cr)
• TH 4841 - Creative Collaboration (3.0 cr)
• TH 3111 - Introduction to Scene Study (3.0 cr)
• TH 3201 - Stage Direction (3.0 cr)
Duluth Campus
Theory and Composition B.Mus.
Music
School of Fine Arts

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 92
- Degree: Bachelor of Music

The B.Mus. in theory and composition is for students pursuing programs of intensive study to prepare for professional careers in music. The program assists students to acquire compositional and analytical skills to best express their musical ideas and provides students with advanced knowledge of the materials of contemporary and historical music and a theoretical understanding of their construction.

Department honors requirements: Candidates, nominated by music department faculty, receive honors for distinguished achievement in musical performance, composition, or exceptional ability and accomplishment as a music educator.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must pass a performance audition to be accepted into any music degree program. At the time of the audition, students must also complete diagnostic examinations in theory/aural/keyboard skills and an interview with the department head or an appointed designee. Any student who receives provisional acceptance into a degree program must pass a review (usually at the end of the first semester) to receive full acceptance. That review includes recommendations of major instructors and successful completion of an applied jury.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
Courses with grades less than C- will not count toward the major.
Introductory Course (1 cr)
Music majors register for 1 credit.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Music Core (22 cr)
MU 100 - Recital Hour (0.0 cr)
MU 1111 - Tonal Harmony I (3.0 cr)
MU 1112 - Ear-Training and Sight-Singing I (1.0 cr)
MU 1121 - Tonal Harmony II [LOGIC & QR] (3.0 cr)
MU 1122 - Ear-Training II (1.0 cr)
MU 2111 - Tonal Harmony III (3.0 cr)
MU 2112 - Ear-Training III (1.0 cr)
MU 2121 - Tonal Harmony IV (3.0 cr)
MU 2122 - Ear-Training, Sight-Singing and Improvisation (1.0 cr)
MU 3201 - Music History I (3.0 cr)
MU 3202 - Music History II (3.0 cr)

Major Course Requirements (38 cr)
MU 2105 register for a total of 4 credits.
MU 3105 register for a total of 4 credits.
MU 4105 register for a total of 4 credits.
MU 4997 register for 2 credits.
MU 5991 register for 3 credits.
MU 1421 - Piano Class I (1.0 cr)
MU 1422 - Piano Class II (1.0 cr)
MU 2105 - Composition I (2.0 cr)
MU 2110 - Jazz Theory (2.0 cr)
MU 3101 - Form and Analysis (2.0 cr)
MU 3105 - Composition II (2.0 cr)
MU 3705 - Instrumental Conducting I (1.0 cr)
MU 3805 - Jazz Writing I (2.0 cr)
MU 4101 - Instrumental Arranging (2.0 cr)
MU 4103 - Contrapuntal Techniques (2.0 cr)
MU 4105 - Composition III (2.0 cr)
MU 4300 - Senior Recital (1.0 cr)
MU 4807 - Music Industry (2.0 cr)
MU 4997 - Internship in Music (1.0 - 2.0 cr)
MU 5201 - Advanced Music History (2.0 cr)
MU 5991 - Independent Study (1.0 - 3.0 cr)
MU 1005 - Jazz Studies [LE CAT9, LECID CAT09, FINE ARTS, CDIVERSITY] (3.0 cr)
or MU 2001 - Ethnic and Folk Music of the World [LE CAT9, LEIP CAT09, FINE ARTS] (3.0 cr)
or MU 2005 - African Roots of American Music [LE CAT9, LECID CAT09, FINE ARTS] (3.0 cr)

Applied Instruction (17 cr)
Students must complete 17 credits; MU 1322 and 8 credits from MU 13xx and 8 credits from MU 43xx. MU 0100 must be taken concurrently each semester with applied instruction in principal instrument.
MU 1322 - Piano-Non Major (1.0 cr)

Principal Instrument - 13xx
Two credits of principal instrument each semester
Take 8 or more credit(s) from the following:
• MU 13xx

Principal Instrument - 43xx
Two credits of principal instrument each semester
Take 8 or more credit(s) from the following:
• MU 43xx

Ensemble Requirements (8 cr)
MU 1xxx: take 4 cr from MU 1501, 1502, 1503, 1510, 1511
MU 4xxx: take 4 cr from MU 4501, 4502, 4503, 4510, 4511
One credit each semester
Take 4 or more course(s) totaling 4 or more credit(s) from the following:
• MU 1xxx
One credit each semester
Take 4 or more course(s) totaling 4 or more credit(s) from the following:
• MU 4xxx

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Advanced Writing (3 cr)
WRIT 3110 - Advanced Writing: Arts and Letters (3.0 cr)

SFA Additional Requirement (3 cr)
Three credits of any 1000-level or 2000-level SFA course(s) from outside the students chosen major (Art, Art History, Dance, Fine Arts, or Theatre), provided that the student meets pre-requisites for the course(s). A 2-credit DN course may be substituted (Art or Music students only).

Proficiency Exam
Advanced proficiency in principal instrument.
MU 300 - Advanced Standing Exam (0.0 cr)
Duluth Campus

Accounting B.Acc.

Labovitz School of Business and Economics

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 98
• Degree: Bachelor of Accounting

The bachelor of accounting provides the core competencies in accounting and general business that are necessary for a successful accounting career. The program includes study in the following areas: financial accounting; management accounting; accounting information systems; financial, operational, and information systems auditing; and taxation. This accounting curriculum is combined with a foundation in the functional areas of business law, finance, information systems, marketing, operations, and management, as well as a broad general education, including the areas of the behavioral sciences, the humanities, English, communication, the arts, mathematics, and statistics.

The primary professional certification in public accounting is the Certified Public Accountant (CPA). Most states, including Minnesota and Wisconsin, require students to complete 150 semester hours of education to become a licensed CPA. All 150 hours may be taken at the undergraduate level or a combination of undergraduate and graduate level courses may be used to satisfy this requirement. At UMD, students can combine their B.Acc. degree with an MBA from another major within LSBE such as the MIS, financial markets, or healthcare management; a minor from LSBE, such as financial planning or MIS; a minor from another collegiate unit, such as computer science, communications, or criminal justice; or additional undergraduate coursework in accounting, business, or other discipline such that the total equals or exceeds 150 hours. (Contact the Department of Accounting for additional information.)

Other types of professional certifications for accountants in private industry do not require 150 hours of education. The Certified Management Accountant (CMA) certificate is issued by the Institute of Management Accounting. The Certified Internal Auditor (CIA) certificate is issued by the Institute of Internal Auditors. The B.Acc. degree program also serves as basic preparation for both the CMA and CIA examinations.

A number of active learning opportunities are available to students in UMD's accounting program. ACCT 3796 Internship in Accounting allows students to apply knowledge and skills gained in the classroom to real-world accounting problems through work experience in sponsoring businesses. Most internships offer a salary, as well as the opportunity to earn credits through a supervised work experience. Another opportunity, ACCT 3705 Volunteer Income Tax Assistance, gives students a general understanding of the U.S. individual income tax system, while providing a valuable service learning experience by assisting low-income clientele with tax planning and compliance. Finally, in ACCT 3701 Student to Business Initiative in Accounting, students working in teams are matched with local small business that need accounting assistance. Students define the specific scope of work with the business owner and then serve as a "consultant" to the business. At the end of the semester, students present the results of their work at the UMD Center for Economic Development offices.

Program Honors: Degree candidates must earn a 3.30 GPA in all LSBE upper division courses

Program Delivery

This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
• 2.60 already admitted to the degree-granting college
• 2.60 transferring from another University of Minnesota college
• 2.60 transferring from outside the University

Freshmen and transfer students are typically admitted as pre-accounting students for the B.Acc. degree. Admission to candidacy status, which allows access to upper division LSBE courses, typically occurs at the junior level when students have successfully completed all pre-major (pre-candidacy) course requirements and met all of the GPA standards. Students with a 2.60 UM and overall, 2.00 internal and pre-major GPAs are admitted upon completion of pre-major courses; students with a 2.00-2.59 UM and overall, 2.00 internal and pre-major GPAs are pooled and reviewed for evidence of academic success in LSBE majors.
Students who do not qualify for admission to candidacy may not take upper division LSBE courses (excluding some economics courses) without permission of the director of student affairs.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

**Required prerequisites**

**Introductory Course (1 cr)**

Not required for transfer students with 30 or more credits, or for students who change college into LSBE.

**UST 1000 - UMD Seminar (1.0 - 2.0 cr)**

**Pre-major Accounting Requirements (37 cr)**

Electives: additional courses to bring total to 60 pre-candidacy credits. Non-LSBE statistics courses cannot be used to fulfill elective requirements. Students must obtain a minimum of a "C" in ACCT 2001 and 2002.

- **ACCT 2001 - Principles of Financial Accounting (3.0 cr)**
- **ACCT 2002 - Principles of Managerial Accounting (3.0 cr)**
- **BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)**
- **ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)**
- **ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)**
- **ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)**
- **MIS 2201 - Information Technology in Business (3.0 cr)**
- **LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)**
- **PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)**
- **WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)**
- **MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)**
  - or **MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)**
  - or **MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)**

**Communications or Foreign Language**

- **COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)**
  - or **COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)**
  - or **LSBE students are encouraged to take at least one year of a college-level foreign language.**

**General Requirements**

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

**Program Requirements**

1. LSBE students are encouraged to take at least one year of college-level foreign language.

2. 50% of all required business credits, including the upper division economics elective, must be taken from LSBE faculty.

3. Students must complete a minimum of 30 credits while enrolled in LSBE.

4. No more than 9 credits (three courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.
B. Acc. Requirements (27 cr)

A. Accounting-Business Law Core (22 cr)
- ACCT 3001 - Technology Tools in Accounting (1.0 cr)
- ACCT 3101 - Intermediate Accounting I (3.0 cr)
- ACCT 3102 - Intermediate Accounting II (3.0 cr)
- ACCT 3201 - Cost Accounting (3.0 cr)
- ACCT 3301 - Accounting Information Systems (3.0 cr)
- ACCT 3401 - Individual Income Taxation (3.0 cr)
- ACCT 4101 - Auditing (3.0 cr)
- BLAW 3001 - Law and Ethics for Financial Professionals (3.0 cr)

B. Active Learning Experience (2 cr)
Take 2 or more credit(s) from the following:
- ACCT 3701 - Small Business Initiative in Accounting (1.0 - 2.0 cr)
- ACCT 3705 - Volunteer Income Tax Assistance (1.0 - 2.0 cr)
- ACCT 3796 - Internship in Accounting (1.0 - 6.0 cr)

C. Accounting Elective (3 cr)
Take 3 or more credit(s) from the following:
- ACCT 4402 - Advanced Business Taxation (3.0 cr)
- ACCT 4501 - Advanced Accounting (3.0 cr)
- ACCT 4505 - International Accounting (3.0 cr)
- ACCT 4510 - Fund and Not-For-Profit Accounting (3.0 cr)
- ACCT 4600 - Employee Benefit and Retirement Planning (3.0 cr)
- ACCT 4795 - Special Topics (Various Titles to be Assigned) (1.0 - 3.0 cr)
- BLAW 4301 - Estate Planning Concepts and Strategies (3.0 cr)

LSBE Core (24 cr)
- BCOM 3141 - Business Communications (3.0 cr)
- FIN 3601 - Corporate Finance (3.0 cr)
- MGTS 3301 - Production and Operations Management (3.0 cr)
- MGTS 3401 - Organizational Behavior and Management (3.0 cr)
- MGTS 3801 - Human Resource Management (3.0 cr)
- MGTS 4481 - Strategic Management (3.0 cr)
- MKTG 3701 - Principles of Marketing (3.0 cr)

Take exactly 3 credit(s) from the following:
- ECON 3xxx
- ECON 4xxx

Supporting Courses (5 cr)
Complete minimum of 5 credits of additional ACCT 3796 credits and/or non-LSBE courses (3xxx or above), including at least one international course listed below. NOTE: PSY 3020, SOC 3155, STAT 3411, or STAT 3611 cannot be used to fulfill this requirement.

Five credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

International Requirement
Take 1 or more course(s) from the following:
- ACCT 4505 - International Accounting (3.0 cr)
- AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
- ECON 3150 - Development Economics (3.0 cr)
- ECON 3402 - Global Economic Issues (3.0 cr)
- ECON 4410 - International Economics (3.0 cr)
- ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
- ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
- FIN 3649 - International Finance (3.0 cr)
- FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
- FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
- FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
- FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
- GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
- GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
- GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
- GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
- HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
- HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
• HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
• MGTS 4474 - International Management (3.0 cr)
• MGTS 4861 - International Human Resource Management (3.0 cr)
• MKTG 4774 - International Marketing (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3456 - International Security: War and More (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4017 - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)

Advance Writing Requirement and Professional Development (4 cr)

WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
LSBE 3000 - Career Development for the Business Professional (1.0 cr)
Duluth Campus
Accounting Minor

Accounting
Labovitz School of Business and Economics

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12 to 31

The minor in accounting is valuable to students who want to understand the accounting process and its applications in modern society. The minor offers training for entry into positions in government, industry, and social service organizations that require an understanding of accounting but not the depth provided by the B.Acc. degree program.

For students outside of LSBE, no more than 25 percent (30 credits) of total credits required for a degree may be drawn from the courses offered by LSBE or recognized by the school as equivalent transfer courses while completing this minor. Economics courses are excluded from these calculations.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
The accounting minor is available to both LSBE students and non-LSBE students. Requirements are described below.

Program Sub-plans
Students are required to complete one of the following sub-plans.

Labovitz School of Business and Economics
LSBE students must be a B.B.A. degree candidate.

Students must apply for admission to the minor and are admitted if eligible for LSBE candidacy status.

Admission to the minor is based on the same GPA requirements as admission to candidacy for LSBE baccalaureate degrees. Applications are available in 111A Labovitz School of Business and Economics Building.

Accounting Core Courses (6 cr)
- ACCT 3101 - Intermediate Accounting I (3.0 cr)
- ACCT 3301 - Accounting Information Systems (3.0 cr)

Accounting Electives (6 cr)
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
- ACCT 3102 - Intermediate Accounting II (3.0 cr)
- ACCT 3401 - Individual Income Taxation (3.0 cr)
- ACCT 3201 - Cost Accounting (3.0 cr)

Non Labovitz School of Business and Economics
Currently, only the business administration minor, the economics minor, and the accounting minor (below) are available to non-LSBE students.
students

Non-LSBE students must apply for admission to the minor before completing ACCT 2002, and/or ECON 2030, or an equivalent non-LSBE statistics course, and are admitted to the minor when admitted to candidacy in LSBE.

An overall and UM GPA of 2.60 and 2.00 in LSBE courses and completion of the pre-minor core are required for automatic admission to this minor. Students with GPAs between 2.00 and 2.60 should consult with LSBE Student Affairs.

Pre-Minor Core (15-19 cr)

- ACCT 2001 - Principles of Financial Accounting (3.0 cr)
- ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
- MIS 2201 - Information Technology in Business (3.0 cr)
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
  - or equivalent stats course (3-4 credits)

Take the following course or course pair:

- ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
- or ECON 1022 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 1023 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)

Minor Courses (6 cr)

- ACCT 3101 - Intermediate Accounting I (3.0 cr)
- ACCT 3301 - Accounting Information Systems (3.0 cr)

Electives (6 cr)

Take 2 or more course(s) totaling 6 or more credit(s) from the following:

- ACCT 3102 - Intermediate Accounting II (3.0 cr)
- ACCT 3401 - Individual Income Taxation (3.0 cr)
- ACCT 3201 - Cost Accounting (3.0 cr)
Duluth Campus
Business Administration Certificate
Labovitz School of Business & Economics - Adm
Labovitz School of Business and Economics

- Program Type: Undergraduate credit certificate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 16
- Degree: Business Administration Certificate

The Certificate in Business Administration is intended to provide a basic introduction to the fundamentals of business to students who may not have had any prior exposure to business. A student must successfully complete all eight modules included in the program in order to earn the Certificate. The eight modules provide coverage in the areas of accounting, economics, finance, human resource management, marketing, operations, organizational management, and statistics. Students who have successfully completed all eight modules would be deemed to have met all the prerequisite foundational requirements for LSBE’s MBA program. All eight courses included in the program are two-credits each and are offered fully online. These courses cannot be used to substitute for any existing LSBE courses.

Program Delivery
This program is available:
- completely online (all program coursework can be completed online)

Admission Requirements
College consent will be required for students to enroll in any of the modules.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
Required Courses (16 cr)
- BUS 2100 - Fundamentals of Accounting (2.0 cr)
- BUS 2200 - Fundamentals of Economics (2.0 cr)
- BUS 2300 - Fundamentals of Operations Management (2.0 cr)
- BUS 2400 - Fundamentals of Organizational Management (2.0 cr)
- BUS 2500 - Fundamentals of Applied Statistics (2.0 cr)
- BUS 2600 - Fundamentals of Financial Management (2.0 cr)
- BUS 2700 - Fundamentals of Marketing (2.0 cr)
BUS 2800 - Fundamentals of Human Resource Management (2.0 cr)
Duluth Campus
Business Administration Minor
Finance & Management Information Sciences, Management Studies, Marketing
Labovitz School of Business and Economics

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 27 to 30

The business administration minor provides supplemental business education for students seeking degrees in programs other than business or accounting.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

An overall and UM GPA of 2.60 and 2.00 within all LSBE courses is required for automatic admission to this minor, along with completion of the pre-minor core. Students with GPAs between 2.00 and 2.59 should consult with LSBE Student Affairs.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
The business administration minor is available to non-LSBE students only.

Pre-Minor Core (12-15 cr)
SCSE students majoring in computer information systems and technology are required to take FMIS 2201 as part of the pre-minor requirements, not CS 1011.
ACCT 2001 - Principles of Financial Accounting (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
  or equivalent statistics course
ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
  or take the following course pair
  ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
  ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Electives (15 cr)
MGTS 3301 - Production and Operations Management (3.0 cr)
FIN 3601 - Corporate Finance (3.0 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)
MGTS 3701 - Principles of Marketing (3.0 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
Duluth Campus  
Economics B.A.  
Labovitz School of Business and Economics

- Program Type: Baccalaureate  
- Requirements for this program are current for Fall 2018  
- Required credits to graduate with this degree: 120  
- Required credits within the major: 48 to 49  
- Degree: Bachelor of Arts

Economics is the study of social, business, and individual decision-making and the goals, incentives, institutions, and constraints affecting those decisions. The BA economics curriculum combines the classical liberal arts and modern quantitative approaches and is designed for students pursuing a second major or minor in traditional liberal arts disciplines or in mathematics and statistics.

The BA prepares students for careers in business and government, the study of law, and graduate work in economics, management, public policy, and related fields. Business careers that require the analytical training of an economist include banking, management, insurance, marketing research, and securities trading. Economists who work for government agencies assess economic conditions in the United States and abroad and predict the economic impact of specific changes in legislation or public policy. Government careers include those in foreign and intelligence service, regulatory agencies, and international trade.

Majors are encouraged to select a discipline that complements their chosen career path or builds on their analytical training. Students have considerable flexibility in designing their major to ensure it meets personal and professional interests and needs. Students should consult their department advisor to define the focus and coverage of their program and select courses in other disciplines. Students interested in graduate study should plan on taking both ECON 3030 and ECON 4213. The department faculty welcomes and encourages student interaction with other students and the faculty through activities such as UROP projects, Omicron Delta Epsilon (honorary society for economics), Economics Club, and other activities and events.

Honors Requirements: The department honors program recognizes majors who demonstrate outstanding academic performance. Department honors are noted in the commencement bulletin and by the following notation on the student's transcript: Graduated with Distinction in Economics.

To be eligible, degree candidates must earn a 3.20 GPA overall. In addition, candidates must earn a 3.20 GPA in economics courses and satisfactorily complete a research project under the guidance of a faculty member or complete an approved internship.

Program Delivery  
This program is available:  
• via classroom (the majority of instruction is face-to-face)

Admission Requirements  
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)  
Not required for transfer students with 30 or more credits, or for students who change college into LSBE.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements  
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:  
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this...
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A second field of study (either a minor or another major).
2. At least 20 of the last 30 credits immediately before graduation must be taken at UMD.
3. Completion of the upper division economics core and an overall GPA of 2.80 for an internship and/or independent study.

Lower Division (17 - 18 cr)
- BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
- ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Math
- MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Statistics
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
- or POL 2700 - Methodology and Analysis [LOGIC & QR] (4.0 cr)
- or PSY 3020 - Statistical Methods (4.0 cr)
- or SOC 3155 - Quantitative Research Methods and Analysis (4.0 cr)
- or STAT 1411 - Introduction to Statistics [LE CAT2, LOGIC & QR] (3.0 cr)
- or STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
- or STAT 3411 - Engineering Statistics (3.0 cr)
- or STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Upper Division (15 cr)
- ECON 3020 - Applied Statistics for Business and Economics II (3.0 cr)
- or STAT 3612 - Introduction to Probability and Statistics II (3.0 cr)
- ECON 3022 - Intermediate Macroeconomics (3.0 cr)
- ECON 3023 - Intermediate Microeconomics (3.0 cr)
- ECON 3030 - Econometrics I (3.0 cr)
- or STAT 5511 - Regression Analysis (3.0 cr)
- ECON 3150 - Development Economics (3.0 cr)
- or ECON 3402 - Global Economic Issues (3.0 cr)

Electives (12 cr)
By approval, one 3xxx or above course outside of ECON may be applied as ECON 3xxx. No more than 6 credits of any combination of internship, independent study, or courses outside ECON can be used for upper division electives.
Take 4 or more course(s) totaling 12 or more credit(s) from the following:
Take no more than 2 course(s) from the following:
- • ECON 3xxx
- • Take 2 or more course(s) totaling 6 or more credit(s) from the following:
- • ECON 4xxx

Advanced Writing Requirement (3 cr)
- BCOM 3141 - Business Communications (3.0 cr)
- or WRIT 31xx
Economics B.B.A.

Economics
Labovitz School of Business and Economics

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 100
- Degree: Bachelor of Business Administration

Economics is the study of how societies, businesses, and individuals allocate limited resources to achieve competing ends. The BBA in economics is designed for students who wish to integrate business and economics courses in a way that allows them to analyze business problems with the insight garnered from the economics discipline. In addition to theoretical and applied courses in economics, students pursuing a BBA with a major in economics will take core courses in business, such as accounting, finance, business law, information systems, marketing, human resources, and management.

This degree provides skills and training for careers in business and industry, law, government, politics, teaching, research, and a variety of other areas. The degree also provides a strong foundation for future graduate studies in business, economics, law, and public administration.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 60 credits before admission to the program.

Freshman and transfer students are usually admitted to pre-major status before admission to this major.

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Pre-Major Requirements (37 cr)
- ACCT 2001 - Principles of Financial Accounting (3.0 cr)
- ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
- BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
- ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
- MIS 2201 - Information Technology in Business (3.0 cr)
- LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
- PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
- UST 1000 - UMD Seminar (1.0 - 2.0 cr)
- WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)

Math
- MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Communications or Foreign Languages
- COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
- or COMM 1222 - Interpersonal Communication [LE CAT3, LEGD CAT03, COMM & LAN] (3.0 cr)
- or LSBE students are encouraged to take at least one year of a college-level foreign language. (see LSBE Advising and Academic Services Office)
General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. 50% of all required business credits, including the upper division economics elective, must be taken from LSBE faculty.
2. Students must complete a minimum of 30 credits while enrolled in LSBE.
3. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

LSBE Core (18 cr)
- MGTS 3301 - Production and Operations Management (3.0 cr)
- FIN 3601 - Corporate Finance (3.0 cr)
- MGTS 3401 - Organizational Behavior and Management (3.0 cr)
- MKTG 3701 - Principles of Marketing (3.0 cr)
- MGTS 3801 - Human Resource Management (3.0 cr)
- MGTS 4481 - Strategic Management (3.0 cr)

Economics Requirements (24 cr)
Requirements (15 cr)
- ECON 3020 - Applied Statistics for Business and Economics II (3.0 cr)
  or STAT 3612 - Introduction to Probability and Statistics II (3.0 cr)
- ECON 3022 - Intermediate Macroeconomics (3.0 cr)
- ECON 3023 - Intermediate Microeconomics (3.0 cr)
- ECON 3030 - Econometrics I (3.0 cr)
  or STAT 5511 - Regression Analysis (3.0 cr)
- ECON 3150 - Development Economics (3.0 cr)
  or ECON 3402 - Global Economic Issues (3.0 cr)

Electives (9 cr)
Two must be 4xxx courses. By approval, one 3xxx or above course outside of ECON may be applied as ECON 3xxx.
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
- ECON 3311 - Money and Banking (3.0 cr)
- ECON 3821 - Labor Economics: Theory and Issues (3.0 cr)
- ECON 4315 - Monetary Theory and Policy (3.0 cr)
- ECON 4410 - International Economics (3.0 cr)
- ECON 4512 - Firm Decision and Strategy (3.0 cr)
- ECON 4590 - Times Series Forecasting and Macroeconomic Policy (3.0 cr)
- ECON 4613 - Oligopoly and Monopoly (3.0 cr)

Advanced Writing and Professional Development (4 cr)
- BCOM 3141 - Business Communications (3.0 cr)
  or WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
- LSBE 3000 - Career Development for the Business Professional (1.0 cr)
Supporting Courses (17 cr)

In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits and upper division (3xxx or above) non-LSBE courses for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611, and SOC 3155 are equivalent to ECON 2030 and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

Economics Requirement

Take exactly 1 course(s) from the following:
• ECON 3xxx
• ECON 4xxx

International Requirement

Take exactly 1 course(s) from the following:
• ACCT 4505 - International Accounting (3.0 cr)
• AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• ANTH 3632 - Latin American Cultures (3.0 cr)
• ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
• ECON 3150 - Development Economics (3.0 cr)
• ECON 3402 - Global Economic Issues (3.0 cr)
• ECON 4410 - International Economics (3.0 cr)
• ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
• ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
• FIN 3649 - International Finance (3.0 cr)
• FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
• FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
• FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
• FST 4295 - INTB 4211 Innovation in Ireland [GLOBAL PER] (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
• GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
• GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
• HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
• HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• HISPM 3501 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• MGT 4474 - International Management (3.0 cr)
• MGT 4861 - International Human Resource Management (3.0 cr)
• MKTG 4774 - International Marketing (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3456 - International Security: War and More (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)
Duluth Campus

Economics Minor

Labovitz School of Business and Economics

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 29 to 30

The economics minor provides a basic overview of economics for students interested in a complementary discipline.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Lower Division (17 - 18 cr)

- **ECON 1022** - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- **ECON 1023** - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
- **BLAW 2001** - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)

Math

- **MATH 1160** - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
  - or **MATH 1296** - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Statistics

- **ECON 2030** - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
  - or **PSY 3020** - Statistical Methods (4.0 cr)
  - or **SOC 3155** - Quantitative Research Methods and Analysis (4.0 cr)
  - or **STAT 1411** - Introduction to Statistics [LE CAT2, LOGIC & QR] (3.0 cr)
  - or **STAT 3611** - Introduction to Probability and Statistics (4.0 cr)

Upper Division (3 cr)

- **ECON 3022** - Intermediate Macroeconomics (3.0 cr)
  - or **ECON 3023** - Intermediate Microeconomics (3.0 cr)

Electives (9 cr)

No more than 3 credits of any combination of internship or independent study can be used for upper division electives. Take 9 or more credit(s) from the following:

- **ECON 3xxx**
- **ECON 4xxx**
Duluth Campus
Entrepreneurship B.B.A
Management Studies
Labovitz School of Business and Economics

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 98
• Degree: Bachelor of Business Administration

Entrepreneurship focuses on the creation of social and economic values by developing core capabilities of idea generation, opportunity recognition, resource acquisition, and entrepreneurial management. These capabilities draw on multi-disciplinary experiences including forming teams, constructing business models, talking with partners and customers, and assessing feasibility while launching a new venture or initiative. The skills and competencies gained by studying entrepreneurship are vital for the success of any business or organization, including nascent startup, corporation, family, nonprofit, global, franchise, or any other setting.

Labovitz School of Business and Economics's (LSBE) Entrepreneurship Program integrates the knowledge and experiences gained in other disciplines, as well as from the field of entrepreneurship, into an understanding of the process of new venture creation, and the management of entrepreneurial businesses. The program provides students with both the breadth and depth of skills necessary to understand the strategic challenges facing a firm: to identify, analyze, and pursue new growth opportunities, and to communicate effectively with critical stakeholders in order to mobilize the support necessary for the creation of new products and services, or the creation of one's own company.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 60 credits before admission to the program.

Freshman and transfer students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
• 2.60 already admitted to the degree-granting college
• 2.60 transferring from another University of Minnesota college
• 2.60 transferring from outside the University

Freshmen and transfer students are typically admitted as pre-business students for all BBA majors. Admission to candidacy status, which allows access to upper division LSBE classes, typically occurs at the junior level when students have successfully completed all pre-major (pre-candidacy) course requirements and met all of the GPA standards. Students with 2.60 overall GPA and 2.0 internal and pre-major GPAs are admitted upon completion of pre-major courses; students with 2.00-2.59 overall GPA and 2.00 internal and pre-major GPAs are pooled and reviewed for evidence of academic success in LSBE majors.

Students who do not qualify for admission to candidacy may not take upper division LSBE courses (excluding some economics courses) without permission of the director of Student Affairs.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
Not required for transfer students with 30 or more credits or for students who change college to LSBE.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Pre-major Requirements (37 cr)
Additional non-LSBE courses to bring total to 60 pre-candidacy credits. Non-LSBE statistics courses cannot be used to fulfill elective requirements.
ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)

Communications or Foreign Languages
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1222 - Interpersonal Communication [LE CAT3, LEC3 CAT03, COMM & LAN] (3.0 cr)
or LSBE students are encouraged to take at least one year of a college-level foreign language. (See LSBE Advising and Academic Services Office)
MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. LSBE students are encouraged to take at least one year of college-level foreign language.
2. 50% of all required business credits, including the upper division economics elective, must be taken from LSBE faculty.
3. Students must complete a minimum of 30 credits while enrolled in LSBE.
4. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

LSBE Core (18 cr)
FIN 3601 - Corporate Finance (3.0 cr)
MGTS 3301 - Production and Operations Management (3.0 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
MGTS 4481 - Strategic Management (3.0 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)

Entrepreneurship Major (21 cr)
Group A
Take the first four courses plus one active learning course for a total of five courses, 15 credits.
BLAW 3201 - Law for Entrepreneurs (3.0 cr)
MGTS 4472 - Entrepreneurship (3.0 cr)
MGTS 4921 - Entrepreneurial Finance (3.0 cr)
MKTG 4741 - Developing and Marketing New Products (3.0 cr)
Active Learning Requirement
MGTS 4941 - Social Entrepreneurship (3.0 cr)
or MGTS 4961 - Entrepreneurial Capstone Experience (3.0 cr)
or MGTS 4997 - Entrepreneurial Internship (1.0 - 6.0 cr)

Group B
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
• Any additional course from Group A Active Learning may also be taken.
• MGTS 4095 - Entrepreneurship Special Topics: (various Titles to be Assigned) (1.0 - 3.0 cr)
• MGTS 4473 - Management of Innovation and Technology (3.0 cr)
• MGTS 4931 - Family Business Management (3.0 cr)
• MGTS 4951 - Environmental Entrepreneurship (3.0 cr)

Group C
Any additional course from Group B electives or selected Entrepreneurship oriented pre-approved courses from another discipline
(department head consent required) may also be taken.
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
• MGTS 4461 - Business Ethics (3.0 cr)
• MGTS 4475 - Negotiations, Bargaining and Conflict Resolution (3.0 cr)
• MKTG 3721 - Social Media Marketing (3.0 cr)
• MKTG 3741 - Fundamentals of Selling (3.0 cr)
• MKTG 4731 - Consumer Behavior (3.0 cr)

Supporting Courses (17 cr)
In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits
and upper division (3xxx or above) non-LSBE courses, for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611
and SOC 3155 are equivalent to ECON 2030 and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second
major or a LSBE minor, may be applied to this requirement.

Economics Requirement
Take exactly 1 course(s) from the following:
• ECON 3xxx
• ECON 4xxx

International Requirement
Take exactly 1 course(s) from the following:
• ACCT 4505 - International Accounting (3.0 cr)
• AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• ANTH 3632 - Latin American Cultures (3.0 cr)
• ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
• ECON 3150 - Development Economics (3.0 cr)
• ECON 3402 - Global Economic Issues (3.0 cr)
• ECON 4410 - International Economics (3.0 cr)
• ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
• ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
• FIN 3649 - International Finance (3.0 cr)
• FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
• FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
• FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
• FST 4296 - INTB 4211 Innovation in Ireland [GLOBAL PER] [GLOBAL PER] (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• GER 4302 - German Women Writers and Filmakers [HUMANITIES] (4.0 cr)
• GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
• GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
• HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
• HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
• MGTS 4474 - International Management (3.0 cr)
• MGTS 4861 - International Human Resource Management (3.0 cr)
• MKTG 4774 - International Marketing (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3456 - International Security: War and More (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)

Advanced Writing and Professional Development Requirement (4 cr)
  BCOM 3141 - Business Communications (3.0 cr)
  or WRIT 3121 - Advanced Writing; Business and Organizations (3.0 cr)
  LSBE 3000 - Career Development for the Business Professional (1.0 cr)
Duluth Campus
Entrepreneurship Minor
Management Studies
Labovitz School of Business and Economics

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12

Entrepreneurship focuses on the creation of social and economic value by developing core capabilities of idea generation, opportunity recognition, resource acquisition, and entrepreneurial management. The skills and competencies gained by studying entrepreneurship are vital for the success of any business or organization such as nascent startup, corporation, family, nonprofit, global, or franchise.

The Entrepreneurship Minor is an interdisciplinary business minor that augments any degree program in which students learn about product/idea generation, resource acquisition, and aspects of entrepreneurial and new venture management. The minor provides knowledge and skills to develop new products, services, and organizations providing social and economic value. The minor is designed to supplement any major such that students acquire capabilities needed to mobilize the support necessary for the creation of new products and services and/or the creation of one's own company.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 60 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

LSBE majors must meet all pre-major BBA or BAc requirements before applying for candidacy, and the form to declare an Entrepreneurship Minor may be submitted with the application for candidacy or any time after formal admission to an LSBE degree program.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
Requirements (12 cr)
BLAW 3201 - Law for Entrepreneurs (3.0 cr)
MGTS 4472 - Entrepreneurship (3.0 cr)
MGTS 4921 - Entrepreneurial Finance (3.0 cr)

Elective
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
- MGTS 4443 - Teams in Organizations (3.0 cr)
- MGTS 4473 - Management of Innovation and Technology (3.0 cr)
- MGTS 4475 - Negotiations, Bargaining and Conflict Resolution (3.0 cr)
- MGTS 4931 - Family Business Management (3.0 cr)
- MGTS 4941 - Social Entrepreneurship (3.0 cr)
- MGTS 4951 - Environmental Entrepreneurship (3.0 cr)
- MKTG 3721 - Social Media Marketing (3.0 cr)
- MKTG 4741 - Developing and Marketing New Products (3.0 cr)
Duluth Campus
Finance B.B.A.
Finance & Management Information Sciences
Labovitz School of Business and Economics

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 98
- Degree: Bachelor of Business Administration

This professionally-oriented program emphasizes the competencies required for management careers in business, government, public, or social service organizations. The program prepares students for entering careers with management responsibility by providing a breadth and depth of knowledge about organizations, management fundamentals, techniques, processes, and skills, combined with a foundation in the functional areas of accounting, business law, finance, information systems, marketing, operations, and human resource management.

The BBA offers a broad educational experience while preparing students for a variety of technical and management careers. With about one-half of the required coursework from non-business disciplines, emphasis is on the development of a strong liberal arts education that provides a foundation for the required and elective professional courses. The program’s core curriculum focuses on the fundamental administrative and functional skills demanded of leaders in today’s public and private organizations. Students are permitted sufficient latitude in choosing electives appropriate to their particular professional objectives in finance, health care management, human resource management, organizational management, management information systems, or marketing.

In addition to classroom-based courses, students may participate in internship programs where classroom learning may be applied during professional experience as an employee of a public agency or private business. Students also may participate in the Student to Business Initiative (SBI) which offers the opportunity to use knowledge and skills to identify, analyze, and solve problems confronting small businesses. Both programs provide practical tests of vocational interests and valuable work experience.

The finance major is designed for students pursuing careers in corporate financial management, investment and portfolio management, and management of financial institutions.

Honors Program: Degree candidates must earn a 3.30 GPA in all LSBE upper division courses.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

Freshmen and transfer students are typically admitted as pre-business students for all BBA majors. Admission to candidacy status, which allows access to upper division LSBE classes, typically occurs at the junior level when students have successfully completed all pre-major (pre-candidacy) course requirements and met all of the GPA standards. Students with a 2.60 UM and overall and a 2.00 internal and pre-major are admitted upon completion of pre-major courses; students with a 2.00-2.59 UM and overall and a 2.00 internal and pre-major GPAs are pooled and reviewed for evidence of academic success in LSBE majors.

Students who do not qualify for admission to candidacy may not take upper division LSBE courses (excluding some economics courses) without permission of the director of student affairs.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory course (1 cr)
Not required for transfer students with 30 or more credits or for students who change college to LSBE.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)
Pre-major requirements (37 cr)
Electives: additional courses to bring total to 60 pre-candidacy credits. Non-LSBE statistics courses cannot be used to fulfill elective requirements.

ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)
LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
Communications or Foreign Languages
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1222 - Interpersonal Communication [LE CAT3, LEC CAT03, COMM & LAN] (3.0 cr)
or LSBE students are encouraged to take at least one year of college-level foreign language. (See LSBE Advising and Academic Services Office).

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. LSBE students are encouraged to take at least one year of college-level foreign language.
2. 50% of all required business credits, including the upper division economics elective, must be taken from LSBE faculty.
3. Students must complete a minimum of 30 credits while enrolled in LSBE.
4. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

LSBE Core (18 cr)
FIN 3601 - Corporate Finance (3.0 cr)
MGTS 3301 - Production and Operations Management (3.0 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
MGTS 4481 - Strategic Management (3.0 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)
Finance Group A (9 cr)
FIN 3601 - Corporation Finance (3 cr) is a prerequisite for these courses
FIN 3612 - Managerial Finance (3.0 cr)
FIN 3644 - Investment Fundamentals (3.0 cr)
FIN 3647 - Financial Markets and Institutions (3.0 cr)

Finance Group B (9 cr)
FIN 3601, 3612, 3644, 3647, 3691, 3697, 4616, 4620 4624, and 4646 may not be used to fulfill this requirement.
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
•FIN 36xx
•FIN 46xx

Finance Group C: (3 cr)
FIN 3697 - Finance Internship (1.0 - 6.0 cr)
or FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
or FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
or any 3xxx or 4xxx course from LSBE

Advanced Writing and Professional Development (4 cr)
BCOM 3141 - Business Communications (3.0 cr)
or WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
LSBE 3000 - Career Development for the Business Professional (1.0 cr)

Supporting Courses (17 cr)
In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits and upper division (3xxx or above) non-LSBE courses, for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611 and SOC 3155 are equivalent to ECON 2030, and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

Economics Requirement
Take exactly 1 course(s) from the following:
•ECON 3xxx
•ECON 4xxx

International Requirement
Take exactly 1 course(s) from the following:
•ACCT 4505 - International Accounting (3.0 cr)
•AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
•ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
•ANTH 3632 - Latin American Cultures (3.0 cr)
•ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
•ECON 3150 - Development Economics (3.0 cr)
•ECON 3402 - Global Economic Issues (3.0 cr)
•ECON 4410 - International Economics (3.0 cr)
•ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
•ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
•FIN 3649 - International Finance (3.0 cr)
•FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
•FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
•FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
•FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
•GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
•GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
•GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
•GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
•HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
•HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
•HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
•HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
•HIST 3306 - The United States and the World since 1898 (4.0 cr)
•HIST 3615 - Modern Africa (4.0 cr)
•HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
•HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
•HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
•MGTS 4474 - International Management (3.0 cr)
•MGTS 4861 - International Human Resource Management (3.0 cr)
•MKTG 4774 - International Marketing (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3456 - International Security: War and More (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)
**Duluth Campus**

**Finance Minor**

*Finance & Management Information Sciences*

**Labovitz School of Business and Economics**

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12 to 30

The minor in finance can be used as a complement to a related discipline. It provides a comprehensive overview of the theories and common practices in corporate finance, investment and portfolio management, and the management of financial institutions.

The finance minor is available to LSBE and Non-LSBE students.

**Program Delivery**

This program is available:

- via classroom (the majority of instruction is face-to-face)

**Admission Requirements**

A GPA above 2.0 is preferred for the following:

- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

**Minor Requirements**

**Program Sub-plans**

Students are required to complete one of the following sub-plans.

**Finance Minor for BBA/BAcc Students**

**Required Courses (12 cr)**

- FIN 3601 - Corporate Finance (3.0 cr)
- FIN 3644 - Investment Fundamentals (3.0 cr)
- FIN 3647 - Financial Markets and Institutions (3.0 cr)

**Electives**

Take at most 3 credit(s) from the following:

- FIN 3612 - Managerial Finance (3.0 cr)
- FIN 3619 - Analysis of Financial Statements (3.0 cr)
- FIN 3649 - International Finance (3.0 cr)
- FIN 3655 - Risk Management and Insurance (3.0 cr)
- FIN 4615 - Derivative Securities (3.0 cr)
- FIN 4617 - Management of Financial Institutions (3.0 cr)
- FIN 4644 - Portfolio Management (3.0 cr)
- FIN 4645 - Financial Modeling and Valuation (3.0 cr)

**Finance Minor for Non-LSBE Students**

A minimum overall and UM GPA of 2.60 and 2.00 in LSBE courses and completion of the pre-minor core are required for automatic admission to this minor. Students with GPAs between 2.00 and 2.59 should consult with the LSBE Advising and Academic Services Office.

**Non-LSBE Students Pre-Minor Core (15 - 18 cr)**

Students are encouraged to complete ECON 1022 and 1023 as pre-minor core prerequisites.

**ACCT 2001 - Principles of Financial Accounting (3.0 cr)**
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
MGTS 1101 - Introduction to Business [LE CAT8] (3.0 cr)
ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
or ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Required Courses (12 cr)
FIN 3601 - Corporate Finance (3.0 cr)
FIN 3644 - Investment Fundamentals (3.0 cr)

Electives
Take at most 6 credit(s) from the following:
• FIN 3612 - Managerial Finance (3.0 cr)
• FIN 3619 - Analysis of Financial Statements (3.0 cr)
• FIN 3647 - Financial Markets and Institutions (3.0 cr)
• FIN 3649 - International Finance (3.0 cr)
• FIN 3655 - Risk Management and Insurance (3.0 cr)
• FIN 4615 - Derivative Securities (3.0 cr)
• FIN 4617 - Management of Financial Institutions (3.0 cr)
• FIN 4644 - Portfolio Management (3.0 cr)
• FIN 4645 - Financial Modeling and Valuation (3.0 cr)
Duluth Campus
Financial Markets Finance B.B.A.
Finance & Management Information Sciences
Labovitz School of Business and Economics

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 98
- Degree: Bachelor of Business Administration

LSBE students may wish to apply for the financial markets finance major program, an intensive academic and experiential preparation for careers in the financial services industry. Classroom instruction is combined with independent laboratory activities, and the program is centered upon four foundational elements: academic studies, the January term practicum in Duluth and the Twin Cities, financial markets laboratory work, and management of the “Bulldog” Investment Fund. Students interested in the program are strongly encouraged to meet with the Financial Markets program director.

Juniors who have a strong interest in the financial industry, and who have completed or are currently registered for FMIS 3601 - Corporation Finance, are encouraged to speak with the program director prior to registration for spring semester. An initial informational meeting or review of program opportunities helps interested students determine whether or not to pursue formal application and the appropriate prerequisite courses.

During spring semester, the application and selection process involves a thorough review of each candidate's application and academic performance, as well as a formal interview. Applicants are reviewed and selected according to their skills, academic qualifications and "fit" with the program in terms of career goals and interests. Candidates are expected to maintain high ethical standards.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 3 courses before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

Students must complete FMIS 3601, FMIS 3619, and FMIS 3644 before admission to the program.

Students must first meet admission to candidacy requirements and be admitted to the finance major, which is necessary to be eligible for the prerequisite courses. Students are then admitted into the financial markets finance major after successful completion of the prerequisites and selection from the individual interview process.

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

Required prerequisites
Introductory Course (1 cr)
This course is not required for students who change colleges into Labovitz School of Business and Economics.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Pre-major Requirements (37 cr)
Electives: additional courses to bring total to 60 pre-candidacy credits. Non-LSBE statistics courses cannot be used to fulfill elective requirements.
AGCT 2001 - Principles of Financial Accounting (3.0 cr)
AGCT 2002 - Principles of Managerial Accounting (3.0 cr)
BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)
MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
    or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
    or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
Communications or Foreign Languages
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
    or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
    or LSBE students are encouraged to take at least one year of college-level foreign language. (See LSBE Advising and Academic Services Office.)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. LSBE students are encouraged to take at least one year of college-level foreign language.
2. 50% of all required business credits, including the upper division economics elective, must be taken from LSBE faculty.
3. Students must complete a minimum of 30 credits while enrolled in LSBE.
4. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

LSBE Core (18 cr)
MGTS 3301 - Production and Operations Management (3.0 cr)
FIN 3601 - Corporate Finance (3.0 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)
MKTG 3801 - Human Resource Management (3.0 cr)
MGTS 4481 - Strategic Management (3.0 cr)

Group A Requirements (12 cr)
Take exactly four courses for exactly 12 credits.
FIN 3612 - Managerial Finance (3.0 cr)
FIN 3619 - Analysis of Financial Statements (3.0 cr)
FIN 3644 - Investment Fundamentals (3.0 cr)
FIN 3647 - Financial Markets and Institutions (3.0 cr)
    or FIN 3649 - International Finance (3.0 cr)
    or FIN 4615 - Derivative Securities (3.0 cr)
    or FIN 4644 - Portfolio Management (3.0 cr)
or FIN 4645 - Financial Modeling and Valuation (3.0 cr)

Group B Requirements (9 cr)
Take exactly three courses for exactly 9 credits.
FIN 4616 - Security Analysis (3.0 cr)
FIN 4620 - Portfolio Theory and Analysis (3.0 cr)
FIN 4624 - Applied Portfolio Management (3.0 cr)

Advanced Writing and Professional Development (4 cr)
BCOM 3141 - Business Communications (3.0 cr)
or WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
LSBE 3000 - Career Development for the Business Professional (1.0 cr)

Supporting Courses (17 cr)
In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits and upper division (3xxx or above) non-LSBE courses for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611 and SOC 3155 are equivalent to ECON 2030 and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

Economics Requirement
Take exactly 1 course(s) from the following:
• ECON 3xxx
• ECON 4xxx

International Requirement
Take exactly 1 course(s) from the following:
• ACCT 4505 - International Accounting (3.0 cr)
• AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• ANTH 3632 - Latin American Cultures (3.0 cr)
• ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
• ECON 3150 - Development Economics (3.0 cr)
• ECON 3402 - Global Economic Issues (3.0 cr)
• ECON 4410 - International Economics (3.0 cr)
• ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
• ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
• FIN 3649 - International Finance (3.0 cr)
• FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
• FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
• FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
• FST 4295 - INTB 4211 Innovation in Ireland [GLOBAL PER] [GLOBAL PER] (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
• GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
• GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
• HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
• HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
• MGTS 4474 - International Management (3.0 cr)
• MGTS 4861 - International Human Resource Management (3.0 cr)
• MKTG 4774 - International Marketing (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3456 - International Security: War and More (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)

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Information current as of October 02, 2018
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)
**Duluth Campus**

**Financial Markets Minor**

*Finance & Management Information Sciences*

**Labovitz School of Business and Economics**

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 18

LSBE candidates or economics majors may wish to apply for the financial markets minor program, an intensive academic and experiential preparation for careers in the financial services industry. Students interested in this program are strongly encouraged to meet with the Financial Markets Program Director.

**Program Delivery**

This program is available:

- via classroom (the majority of instruction is face-to-face)

**Admission Requirements**

Students must complete 3 courses before admission to the program.

Freshman and transfer students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:

- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Admission to the minor is based on the same GPA requirements as admission to candidacy for LSBE baccalaureate degrees.

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

**Required prerequisites**

**Required pre-requisites (9 cr)**

Students are admitted into the minor program after successful completion of the prerequisite courses and selection from the individual interview process.

- FIN 3601 - Corporate Finance (3.0 cr)
- FIN 3619 - Analysis of Financial Statements (3.0 cr)
- FIN 3644 - Investment Fundamentals (3.0 cr)

**Minor Requirements**

**Required Courses (9 cr)**

Take 3 courses totaling exactly 9 credits.

- FIN 4616 - Security Analysis (3.0 cr)
- FIN 4620 - Portfolio Theory and Analysis (3.0 cr)
- FIN 4624 - Applied Portfolio Management (3.0 cr)
Duluth Campus

Financial Planning B.B.A.
Finance & Management Information Sciences
Labovitz School of Business and Economics

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 98
- Degree: Bachelor of Business Administration

The BBA in financial planning (FP) integrates the knowledge, skills, and experiences gained in the core business and economics disciplines such as accounting, economics, finance, management, and marketing, as well as from the field of financial planning, into an understanding of the financial planning domains and business processes. Students will learn how to utilize new technologies to study and analyze investments, risks, retirement, insurance, and estate planning. The program provides students with a foundation for immediate integration into the practices in the financial planning industry. Students pursuing Financial Planning as a major are well prepared for careers in financial planning in many different facets of the industry. Students can build a private practice or work with financial institutions, registered investment advisers, insurance companies, broker/dealers, and even non-profit entities. The program is registered with the Certified Financial Planner Board of Standards, Inc. (CFP Board) and is grounded with the core courses that will fulfill the educational requirements to take the CFP (Certified Financial Planner) exam.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 60 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

Students will need to apply for admission into the major. Admissions will be based on interview and review of previous academic record.

A student cannot major in accounting, finance, and financial planning because of overlap in major requirements.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Course (1 cr)
Not required for transfer students with 30 or more credits or for students who change college into LSBE.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Pre-major Requirements (37 cr)
Electives: additional courses to bring total to 60 pre-candidacy credits. Non-LSBE statistics courses cannot be used to fulfill elective requirements.
ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)
MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
-or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
-or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
Communications or Foreign Languages
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
or LSBE students are encouraged to take at least one year of college-level foreign language. (See LSBE Advising and Academic Services Office).

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
LSBE Core (18 cr)
FIN 3601 - Corporate Finance (3.0 cr)
MGTS 3301 - Production and Operations Management (3.0 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
MGTS 4481 - Strategic Management (3.0 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)

Advanced Writing and Professional Development Requirement (4 cr)
BCOM 3141 - Business Communications (3.0 cr)
or WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
LSBE 3000 - Career Development for the Business Professional (1.0 cr)

Financial Planning Group A (18 cr)
ACCT 3401 - Individual Income Taxation (3.0 cr)
ACCT 4600 - Employee Benefit and Retirement Planning (3.0 cr)
BLAW 4301 - Estate Planning Concepts and Strategies (3.0 cr)
FIN 3644 - Investment Fundamentals (3.0 cr)
FIN 3655 - Risk Management and Insurance (3.0 cr)
FIN 4646 - Financial Plan Development (3.0 cr)

Financial Planning Group B (3 cr)
Take 3 or more credit(s) from the following:
• ACCT 4402 - Advanced Business Taxation (3.0 cr)
• MGTS 4461 - Business Ethics (3.0 cr)
• MGTS 4472 - Entrepreneurship (3.0 cr)
• MKTG 3721 - Social Media Marketing (3.0 cr)
• MKTG 3741 - Fundamentals of Selling (3.0 cr)
• MKTG 4731 - Consumer Behavior (3.0 cr)

Supporting Courses (17 cr)
In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits and upper division (3xxx or above) non-LSBE courses for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611
and SOC 3155 are equivalent to ECON 2030 and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

**Economics Requirement**
Take exactly 1 course(s) from the following:
- ECON 3xxx
- ECON 4xxx

**International Requirement**
Take exactly 1 course(s) from the following:
- ACCT 4505 - International Accounting (3.0 cr)
- AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
- ECON 3150 - Development Economics (3.0 cr)
- ECON 3402 - Global Economic Issues (3.0 cr)
- ECON 4410 - International Economics (3.0 cr)
- ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
- ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
- FIN 3649 - International Finance (3.0 cr)
- FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
- FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
- FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
- FST 4295 - INTB 4211 Innovation in Ireland [GLOBAL PER] [GLOBAL PER] (3.0 cr)
- GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
- GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
- GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
- GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
- HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
- HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
- HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
- HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
- HIST 3386 - The United States and the World since 1898 (4.0 cr)
- HIST 3615 - Modern Africa (4.0 cr)
- HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
- HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
- HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
- MGTS 4861 - International Human Resource Management (3.0 cr)
- MKTG 4774 - International Marketing (3.0 cr)
- POL 3451 - Theories of International Relations (4.0 cr)
- POL 3456 - International Security: War and More (4.0 cr)
- POL 3517 - Western European Political Systems (4.0 cr)
- POL 3570 - Politics of Developing Nations (3.0 cr)
- SOC 3945 - Social Stratification (3.0 cr)
- SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
- SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
- SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
- SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
- SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
- WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
- WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
- WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
- WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)
Duluth Campus
Financial Planning Minor
Finance & Management Information Sciences
Labovitz School of Business and Economics

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 24 to 36

The financial planning minor is designed to be a Certified Financial Planner (CFP) board-registered program so it can be used to fulfill the education requirements for the CFP certification. Upon completion of this program, students are eligible to sit for the CFP Board of Standard certification examination, leading to the professional CFP designation.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
• 2.60 already admitted to the degree-granting college
• 2.60 transferring from another University of Minnesota college
• 2.60 transferring from outside the University

Admission to the minor is competitive and a planned admission process will be established to manage the cohort through the two-year time frame.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
The Financial Planning minor is available to both LSBE students and non-LSBE students. Requirements are described below.

Program Sub-plans
Students are required to complete one of the following sub-plans.

Labovitz School of Business and Economics
Financial Planning (24 cr)
- ACCT 2001 - Principles of Financial Accounting (3.0 cr)
- ACCT 3401 - Individual Income Taxation (3.0 cr)
- ACCT 4600 - Employee Benefit and Retirement Planning (3.0 cr)
- BLAW 4301 - Estate Planning Concepts and Strategies (3.0 cr)
- FIN 3601 - Corporate Finance (3.0 cr)
- FIN 3644 - Investment Fundamentals (3.0 cr)
- FIN 3655 - Risk Management and Insurance (3.0 cr)
- FIN 4646 - Financial Plan Development (3.0 cr)

Non Labovitz School of Business and Economics
Pre-minor Requirements (15 cr)
- ACCT 2001 - Principles of Financial Accounting (3.0 cr)
- BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
- ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)

An equivalent statistics course may be allowed in place of ECON 2030; students must consult with an adviser for prior approval.

Upper Division Prerequisite Requirement (3 cr)
- FIN 3601 - Corporate Finance (3.0 cr)

Financial Planning Required Courses (18 cr)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 3401</td>
<td>Individual Income Taxation</td>
<td>3.0 cr</td>
</tr>
<tr>
<td>ACCT 4600</td>
<td>Employee Benefit and Retirement Planning</td>
<td>3.0 cr</td>
</tr>
<tr>
<td>BLAW 4301</td>
<td>Estate Planning Concepts and Strategies</td>
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<td>FIN 4646</td>
<td>Financial Plan Development</td>
<td>3.0 cr</td>
</tr>
</tbody>
</table>
Health Care Management B.B.A.

Economics
Labovitz School of Business and Economics

- Program Type: Baccalaureate
- Required credits for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 98
- Degree: Bachelor of Business Administration

The health care management major focuses on the administration, financing, and economics of the health services sector. The program prepares students for careers in health care administration and policy in hospitals, clinics, government agencies, insurance and managed care organizations, pharmaceutical and biotechnology firms, medical device companies, and consulting agencies.

Students gain an understanding of the many critical issues in health care delivery, such as health care quality assessment and improvement, health information technology applications, health care ethics, compliance with health care regulations, physician contracting and reimbursement, and billing and claims processing. Students learn about health policy and health care reform, such as proposals for universal health insurance coverage and the structure of health care systems outside of the United States.

This professionally-oriented program also emphasizes the competencies required for management careers in business, government, public, or social service organizations. The program prepares students for entering careers with management responsibility by providing breadth and depth of knowledge about organizations, management fundamentals, techniques, processes, and skills, combined with a foundation in the functional areas of accounting, business law, finance, health care management, information systems, marketing, operations, and human resource management.

The B.B.A. offers a broad educational experience while preparing students for a variety of technical and management careers. With about one-half of the required coursework from non-business disciplines, emphasis is on the development of a strong liberal arts education that provides a foundation for the required and elective professional courses. The program's core curriculum focuses on the fundamental administrative and functional skills demanded of leaders in today's public and private organizations. Students are permitted sufficient latitude in choosing electives appropriate for their particular professional objectives in finance, health care management, human resource management, organizational management, management information systems, or marketing.

In addition to classroom-based courses, students may participate in internship programs where classroom learning may be applied during professional experience as an employee of a public agency or private business.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

Freshmen and transfer students are typically admitted as pre-business students for all B.B.A. majors. Admission to candidacy status, which allows access to upper division LSBE classes, typically occurs at the junior level when students have successfully completed all pre-major (pre-candidacy) course requirements and met all of the GPA standards. Students with a 2.60 UM and overall, 2.00 internal and pre-major, are admitted upon completion of pre-major courses; students with a 2.00-2.59 UM and overall, 2.00 internal and pre-major GPAs, are pooled and reviewed for evidence of academic success in LSBE majors.

Students who do not qualify for admission to candidacy may not take upper division LSBE courses (excluding some economics courses) without permission of the director of Student Affairs.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory course (1 cr)
Not required for transfer students with 30 or more credits, or for students who change college to LSBE.

**UST 1000 - UMD Seminar (1.0 - 2.0 cr)**

**Pre-major requirements (37 cr)**
- **ACCT 2001 - Principles of Financial Accounting (3.0 cr)**
- **ACCT 2002 - Principles of Managerial Accounting (3.0 cr)**
- **BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)**
- **ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)**
- **ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)**
- **ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)**
- **MIS 2201 - Information Technology in Business (3.0 cr)**
- **PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)**
- **WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)**
- **LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)**
- **MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)**
  or **MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)**
  or **MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)**

**Communications or Foreign Languages**
- **COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)**
  or **COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)**
  or **LSBE students are encouraged to take at least one year of college-level foreign language. (See LSBE Advising and Academic Services Office)**

**General Requirements**
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

**Program Requirements**

1. LSBE students are encouraged to take at least one year of college-level foreign language.

2. 50% of all required business credits, including the upper division economics elective, must be taken from LSBE faculty.

3. Students must complete a minimum of 30 credits while enrolled in LSBE.

4. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

**LSBE Core (18 cr)**
- **MGTS 3301 - Production and Operations Management (3.0 cr)**
- **FIN 3601 - Corporate Finance (3.0 cr)**
- **MGTS 3401 - Organizational Behavior and Management (3.0 cr)**
- **MGTS 3801 - Human Resource Management (3.0 cr)**
- **MGTS 4481 - Strategic Management (3.0 cr)**
- **MKTG 3701 - Principles of Marketing (3.0 cr)**
Health Care Management Group A (12 cr)
- HCM 4520 - Health Care Organization and Management (3.0 cr)
- HCM 4530 - Legal Aspects of and Ethics in Health Care (3.0 cr)
- HCM 4570 - Health Care Quality Management (3.0 cr)
- HCM 4597 - Internship (1.0 - 6.0 cr)

Health Care Management Group B (9 cr)
An LSB or non-LSBE 3xxx-4xxx course may be taken with prior approval. Students may take either FST 4225 OR FST 4295, but not both, for credit within this requirement. Only one INTB course may be used.

Take 9 or more credit(s) from the following:
- MIS 4220 - Medical Informatics (3.0 cr)
- FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
- FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
- HCM 4510 - Medical Sociology (3.0 cr)
- HCM 4550 - Health Care Finance (3.0 cr)
- HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
- HCM 4580 - Health Services Data and Analysis (3.0 cr)
- HCM 4591 - Independent Study (1.0 - 3.0 cr)
- HCM 4595 - Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
- INTB 4221 - Health Care and Families in Thailand (3.0 cr)

Supporting Courses (17 cr)
In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits and upper division (3xxx or above) non-LSBE courses, for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611 and SOC 3155 are equivalent to ECON 2030 and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

Economics Requirement
- ECON 3910 - Economics of Health Care (3.0 cr)

International Requirement
Take exactly 1 course(s) from the following:
- AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
- ECON 3150 - Development Economics (3.0 cr)
- ECON 3402 - Global Economic Issues (3.0 cr)
- ECON 4410 - International Economics (3.0 cr)
- ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
- ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
- FIN 3649 - International Finance (3.0 cr)
- FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
- FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
- FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
- FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
- GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
- GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
- GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
- HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
- HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
- HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
- HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
- HIST 3386 - The United States and the World since 1898 (4.0 cr)
- HIST 3615 - Modern Africa (4.0 cr)
- HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
- HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
- HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
- MGTS 4474 - International Management (3.0 cr)
- MKTG 4861 - International Human Resource Management (3.0 cr)
- MKTG 4774 - International Marketing (3.0 cr)
- POL 3451 - Theories of International Relations (4.0 cr)
- POL 3456 - International Security: War and More (4.0 cr)
- POL 3517 - Western European Political Systems (4.0 cr)
- POL 3570 - Politics of Developing Nations (3.0 cr)
- SOC 3945 - Social Stratification (3.0 cr)

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Information current as of October 02, 2018
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)

Advanced Writing and Professional Development Requirement (4 cr)

BCOM 3141 - Business Communications (3.0 cr)
or WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
LSBE 3000 - Career Development for the Business Professional (1.0 cr)
Duluth Campus
Health Care Management Minor
Labovitz School of Business & Economics - Adm
Labovitz School of Business and Economics

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 15 to 30

The health care management minor teaches students about the health care system and how to apply management, economic, and legal methods to solve health care service problems. A minor in health care management complements the existing business majors, particularly for students who would like to apply their skills and knowledge in the health care sector.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
• 2.60 already admitted to the degree-granting college
• 2.60 transferring from another University of Minnesota college
• 2.60 transferring from outside the University

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
This minor is available to Labovitz School of Business and Economics and non-LSBE students. Requirements for admission to the minor are the same for admission to candidacy.

Program Sub-plans
Students are required to complete one of the following sub-plans.

Health Care Management Minor for BBA/BAcc Students
Requirements (15 cr)
ECON 3910 - Economics of Health Care (3.0 cr)
HCM 4520 - Health Care Organization and Management (3.0 cr)
HCM 4530 - Legal Aspects of and Ethics in Health Care (3.0 cr)
HCM 4570 - Health Care Quality Management (3.0 cr)
Take 3 or more credit(s) from the following:
• MIS 4220 - Medical Informatics (3.0 cr)
• HCM 4510 - Medical Sociology (3.0 cr)
• HCM 4550 - Health Care Finance (3.0 cr)
• HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
• HCM 4595 - Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• HCM 4597 - Internship (1.0 - 6.0 cr)
• INTB 4221 - Health Care and Families in Thailand (3.0 cr)

Health Care Management Minor for Non-LSBE Students
Non-LSBE Students Pre-Minor Core (15 - 18 cr)
Students are encouraged to complete ECON 1022 and 1023 as pre-minor core prerequisites.
ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
MGTS 1101 - Introduction to Business [LE CAT8] (3.0 cr)
ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
or ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Requirements (12 cr)
ECON 3910 - Economics of Health Care (3.0 cr)
HCM 4520 - Health Care Organization and Management (3.0 cr)
HCM 4530 - Legal Aspects of and Ethics in Health Care (3.0 cr)
HCM 4570 - Health Care Quality Management (3.0 cr)
Duluth Campus
International Business Minor
Management Studies
Labovitz School of Business and Economics

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12

The international business minor is an interdisciplinary business minor that enhances students knowledge of global issues within organizations and the business environment. The minor will provide students with an increased awareness of challenges and opportunities associated with the globalization of the marketplace and the workplace.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

This minor is for only for LSBE majors who must meet all pre-major BBA or BAc requirements before applying for candidacy for these degree programs, and the form to declare an international business minor may be submitted with the application for candidacy or any time after formal admission to an LSBE degree program.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
Group A (9 cr)
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
- ACCT 4505 - International Accounting (3.0 cr)
- FIN 3649 - International Finance (3.0 cr)
- MGTS 4474 - International Management (3.0 cr)
- MGTS 4861 - International Human Resource Management (3.0 cr)
- MKTG 4774 - International Marketing (3.0 cr)

Group B (3 cr)
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
- ECON 3150 - Development Economics (3.0 cr)
- ECON 3402 - Global Economic Issues (3.0 cr)
- ECON 4410 - International Economics (3.0 cr)
- HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
- INTB 3xxx
- INTB 4xxx
**Duluth Campus**

Management B.B.A.

Management Studies

Labovitz School of Business and Economics

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 98
- Degree: Bachelor of Business Administration

This professionally oriented program emphasizes the competencies required for management careers in business, government, public, or social service organizations. The program prepares students for entering careers with management responsibility by providing a breadth and depth of knowledge about organizations, management fundamentals, techniques, processes, and skills, combined with a foundation in the functional areas of accounting, business law, finance, information systems, marketing, operations, and human resource management.

The BBA offers a broad educational experience while preparing students for a variety of technical and management careers. With about one-half of the required coursework from nonbusiness disciplines, emphasis is on the development of a strong liberal arts education that provides a foundation for the required and elective professional courses. The program's core curriculum focuses on the fundamental administrative and functional skills demanded of leaders in today's public and private organizations. Students are permitted sufficient latitude in choosing electives appropriate to their particular professional objectives in finance, human resource management, organizational management, management information systems, or marketing.

In addition to classroom-based courses, students may participate in internship programs where classroom learning may be applied during professional experience as an employee of a public agency or private business. The internship program provides practical tests of vocational interests and valuable work experience.

Honors Program: Degree candidates must earn a 3.30 GPA in all LSBE upper division courses.

**Program Delivery**

This program is available:
- via classroom (the majority of instruction is face-to-face)

**Admission Requirements**

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

Freshmen and transfer students are typically admitted as pre-business students for all BBA majors. Admission to candidacy status, which allows access to upper division LSBE classes, typically occurs at the junior level when students have successfully completed all pre-major (pre-candidacy) course requirements, and met all of the GPA standards. Students with a 2.60 UM and overall, 2.00 internal and pre-major, are admitted upon completion of pre-major courses; students with a 2.00-2.59 UM and overall, 2.00 internal and pre-major GPAs, are pooled and reviewed for evidence of academic success in LSBE majors.

Students who do not qualify for admission to candidacy may not take upper division LSBE courses (excluding some economics courses) without permission of the director of Student Affairs.

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](http://www.umn.edu/).

**Required prerequisites**

*Introductory course (1 cr)*

Not required for transfer students with 30 or more credits, or for students who change college to LSBE.

- UST 1000 - UMD Seminar (1.0 - 2.0 cr)

**Pre-major requirements (37 cr)**

Additional non-LSBE courses to bring total to 60 pre-candidacy credits.

Non-LSBE statistics courses cannot be used to fulfill elective requirements.
ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)
MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
\textit{or} MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
\textit{or} MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

**Communications or Foreign Languages**
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
\textit{or} COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
\textit{or} Foreign Language Courses-LSBE students are encouraged to take at least one year of college-level foreign language. (See LSBE Advising and Academic Services Office)

**General Requirements**
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the **Liberal Education Program**.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

**Program Requirements**

1. LSBE students are encouraged to take at least one year of college-level foreign language.

2. 50% of all required business credits, including the upper division economics elective, must be taken from LSBE faculty.

3. Students must complete a minimum of 30 credits while enrolled in LSBE.

4. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

**LSBE Core (18 cr)**
MGTS 3301 - Production and Operations Management (3.0 cr)
FIN 3601 - Corporate Finance (3.0 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
MGTS 4481 - Strategic Management (3.0 cr)

**Supporting Courses (17 cr)**
In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits and upper division (3xxx or above) non-LSBE courses, for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611 and SOC 3155 are equivalent to ECON 2030, and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second
major or a LSBE minor, may be applied to this requirement.

**Economics Requirement**
Take exactly 1 course(s) from the following:
- ECON 3xxx
- ECON 4xxx

**International Requirement**
Take exactly 1 course(s) from the following:
- ACCT 4505 - International Accounting (3.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
- ECON 3150 - Development Economics (3.0 cr)
- ECON 3402 - Global Economic Issues (3.0 cr)
- ECON 4410 - International Economics (3.0 cr)
- ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
- ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
- FIN 3649 - International Finance (3.0 cr)
- FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
- FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
- FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
- FST 4295 - INTB 4211 Innovation in Ireland [GLOBAL PER] [GLOBAL PER] (3.0 cr)
- GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
- GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
- GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
- GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
- HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
- HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
- HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
- HIST 3247 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
- HIST 3386 - The United States and the World since 1898 (4.0 cr)
- HIST 3615 - Modern Africa (4.0 cr)
- HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
- HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
- HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
- MGTS 4474 - International Management (3.0 cr)
- MKTG 4774 - International Marketing (3.0 cr)
- POL 3451 - Theories of International Relations (4.0 cr)
- POL 3456 - International Security: War and More (4.0 cr)
- POL 3517 - Western European Political Systems (4.0 cr)
- POL 3570 - Politics of Developing Nations (3.0 cr)
- SOC 3945 - Social Stratification (3.0 cr)
- SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
- SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
- SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
- SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
- SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
- WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
- WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
- WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
- WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)

**Advanced Writing and Professional Development Requirement (4 cr)**
- BCOM 3141 - Business Communications (3.0 cr)
  - or WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
- LSBE 3000 - Career Development for the Business Professional (1.0 cr)

**Program Sub-plans**
Students are required to complete one of the following sub-plans.

**Human Resource Management**
The work of the human resource management (HRM) professional encompasses a broad range of activities affecting the relationship...
between an organization and its employees--its human resources. HRM involves strategic functions, such as organizational planning and human resource policy making, and diverse activities that involve designing and implementing policies, and selecting, developing, evaluating, and rewarding a workforce. Typical HRM activities include equal employment opportunity, the study and design of jobs, employee benefit programs, union-management relations, counseling, and the development of work systems that are consistent with the prevailing organizational philosophy.

Group A Electives (15 cr)
Take 5 or more course(s) totaling 15 or more credit(s) from the following:
• MGTS 4475 - Negotiations, Bargaining and Conflict Resolution (3.0 cr)
• MGTS 4821 - Staffing Work Organizations (3.0 cr)
• MGTS 4831 - Compensation Systems (3.0 cr)
• MGTS 4841 - Training and Development (3.0 cr)
• MGTS 4851 - Labor Relations (3.0 cr)
• MGTS 4861 - International Human Resource Management (3.0 cr)
• MGTS 4871 - Strategic Human Resource Management (3.0 cr)
• MGTS 4881 - Human Resource Issues and Trends (3.0 cr)
• MGTS 4895 - Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)

Group B Electives (total of 2 courses required from 2 different categories) (6 cr)
1. Additional course from Group A.
2. ECON 3821 or selected human resource-oriented course from other discipline (department head consent required).
3. Upper division organizational management course (MGTS 44xx), HCM 4520 - Health Care Organization and Management or MIS 3241 - Data Analytics; FST 4225 or 4295 may also be used.
4. Internship/Field Studies
   MGTS 3897 - Human Resources Internship (1.0 - 6.0 cr)
   or MGTS 3997 - Management of Community Projects (1.0 - 3.0 cr)

Organizational Management
Managers facilitate the work of others to accomplish goals that might not be achieved by a single individual and need to know about the environment surrounding the organization, the roles that managers can take, and the techniques that effectively guide employees. The curriculum allows students to become familiar with different types of organizations and their members. Among the many topics covered are organizational environments, groups and teams at work, leadership, and employee empowerment. Students are given the opportunities to learn more about organizations' complex systems.

MGTS 3401 - Organizational Behavior and Management, a part of the LSBE core, is a prerequisite for all of the courses that appear in the track. Organizational management track students are encouraged to take MGTS 3401 as soon as they are eligible for the course.

Organizational Management Group A (9 cr)
Select one course from each of the three categories.

Category 1: Macro OB courses:
• MGTS 4295 - Special Macro Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• or MGTS 4411 - High Performance Organization Design and Transformation (3.0 cr)

Category 2: Micro OB courses:
• MGTS 4195 - Micro Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• or MGTS 4431 - Leadership Studies (3.0 cr)
• or MGTS 4443 - Teams in Organizations (3.0 cr)
• or MGTS 4451 - Management Inquiry (3.0 cr)

Category 3: Ethics and sustainability:
• MGTS 4461 - Business Ethics (3.0 cr)
• or MGTS 4463 - Sustainability and Sustainable Management (3.0 cr)

Organizational Management Group B (9 cr)
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
• One or more MGTS 44xx courses
• MGTS 3497 - Organizational Management Internship (1.0 - 6.0 cr)
• MGTS 4395 - Process Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• MGTS 4931 - Family Business Management (3.0 cr)

Organizational Management Group C (3 cr)
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
• One additional Group B course
• Any upper division LSBE elective in accounting, business law, entrepreneurship, finance, human resources, marketing, management information systems or health care management. FST 4225 or 4295 may be used. Internships from other disciplines cannot be used to fulfill this requirement.
Duluth Campus
Management Information Systems B.B.A.
Finance & Management Information Sciences
Labovitz School of Business and Economics

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 98
- Degree: Bachelor of Business Administration

The Management Information Systems (MIS) program prepares students for entry into careers in business computing. The major gives students both in-depth technical skills needed to design, implement, support, and manage information systems, as well as the breadth of knowledge in all business-functional areas needed to produce and manage integrative, technology-based solutions to business and organizational problems.

This professionally oriented program emphasizes the competencies required for management careers in business, government, public, or social service organizations. The program prepares students for entering careers with management responsibility by providing a breadth and depth of knowledge about organizations, management fundamentals, techniques, processes, and skills, combined with a foundation in the functional areas of accounting, business law, finance, information systems, marketing, operations, and human resource management.

The BBA offers a broad educational experience, while preparing students for a variety of technical and management careers. With about one-half of the required coursework from non-business disciplines, emphasis is on the development of a strong liberal arts education that provides a foundation for the required and elective professional courses. The program's core curriculum focuses on the fundamental administrative and functional skills demanded of leaders in today's public and private organizations. Students are permitted sufficient latitude in choosing electives appropriate to their particular professional objectives in finance, human resource management, organizational management, management information systems, or marketing.

In addition to classroom-based courses, students may participate in internship programs where classroom learning may be applied during professional experience as an employee of a public agency or private business. Students also may participate in the Student to Business Initiative (SBI), which offers the opportunity to use knowledge and skills to identify, analyze, and solve problems confronting small businesses. Both programs provide practical tests of vocational interests and valuable work experience.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

Freshmen and transfer students are typically admitted as pre-business students for all BBA majors. Admission to candidacy status typically occurs at the junior level when students have successfully completed all pre-major course requirements and met GPA standards. Students with 2.60 UM and overall, and 2.00 internal and pre-major GPAs, are admitted upon completion of pre-major courses; students with 2.00-2.59 UM and overall, and 2.00 internal and pre-major GPAs, are pooled and reviewed for evidence of academic success in LSBE majors.

Students who do not qualify for admission to candidacy may not take upper division LSBE courses (excluding some economics courses) without permission of the director of Student Affairs.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory course (1 cr)
- Not required for transfer students with 30 or more credits, or for students who change college into LSBE.
- UST 1000 - UMD Seminar (1.0 - 2.0 cr)
Pre-major requirements (37 cr)

ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)

MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Communications or Foreign Languages

Students should see Student Affairs staff for approved foreign languages courses.

COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
or LSBE students are encouraged to take at least one year of a college-level foreign language. (See LSBE Advising and Academic Services Office.)

General Requirements

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. LSBE students are encouraged to take at least one year of college-level foreign language.
2. Strict limitations on use of correspondence courses. See LSBE Student Affairs.
3. At least 50% of the required accounting, business, and upper division economics credits must be taken at UMD.

LSBE Core (18 cr)

MGTS 3301 - Production and Operations Management (3.0 cr)
FIN 3601 - Corporate Finance (3.0 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
MGTS 4481 - Strategic Management (3.0 cr)

Management Info Systems Group A (12 cr)
MIS 3220 - Database Management and Design (3.0 cr)
MIS 4223 - Systems Analysis and Design (3.0 cr)
MIS 3232 - Computer Programming for Business (3.0 cr)
MIS 4225 - Advanced Applications Development (3.0 cr)

Management Info Systems Group B (6 cr)
Take exactly 6 credit(s) from the following:
• MIS 3224 - Data Communications and Computer Networks (3.0 cr)
• MIS 3295 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
• MIS 3297 - MIS Internship (1.0 - 6.0 cr)
• MIS 4220 - Medical Informatics (3.0 cr)
• MIS 4221 - XML and Information Management (3.0 cr)

Management Information Systems Group C (3 cr)
ACCT 3301 - Accounting Information Systems (3.0 cr)
or COMM 3211 - Communication and Technology in the Information Age (3.0 cr)
or COMM 3560 - Video Game Entertainment (3.0 cr)
or CS 3011 - Information Technology Hardware and Software (4.0 cr)
or FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
or FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
or JOUR 3700 - Media Law and Ethics (3.0 cr)
or MGTS 4472 - Entrepreneurship (3.0 cr)
or MGTS 4473 - Management of Innovation and Technology (3.0 cr)
or WRIT 4220 - Document Design and Graphics (3.0 cr)
or WRIT 4230 - Web Design and Digital Culture (3.0 cr)
or WRIT 4250 - New Media Writing (3.0 cr)
or WRIT 4260 - Visual Rhetoric and Culture (3.0 cr)
or Additional course from Group B
or Selected upper division technology orientated course from other disciplines with MIS faculty consent.

Supporting Courses (17 cr)
In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits and upper division (3xxx or above) non-LSBE courses for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611 and SOC 3155 are equivalent to ECON 2030 and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

Economics Requirement
Take exactly 1 course(s) from the following:
• ECON 3xxx
• ECON 4xxx

International Requirement
Take exactly 1 course(s) from the following:
• ACCT 4505 - International Accounting (3.0 cr)
• AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• ANTH 3632 - Latin American Cultures (3.0 cr)
• ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
• ECON 3150 - Development Economics (3.0 cr)
• ECON 3402 - Global Economic Issues (3.0 cr)
• ECON 4410 - International Economics (3.0 cr)
• ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
• ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
• FIN 3649 - International Finance (3.0 cr)
• FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
• FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
• FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
• FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
• GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
• GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
• HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
• HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<td>HIST 3615</td>
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<td>HIST 3616</td>
<td>Society and Culture in 20th-Century Africa (4.0 cr)</td>
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<td>HIST 3825</td>
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<td>Mkt 4861</td>
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<td>POL 3451</td>
<td>Theories of International Relations (4.0 cr)</td>
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<td>Social Stratification (3.0 cr)</td>
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<td>SPAN 3042</td>
<td>Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)</td>
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<td>Women and Film [GLOBAL PER] (3.0 cr)</td>
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**Advanced Writing Requirement and Professional Development (4 cr)**

- **BCOM 3141** - Business Communications (3.0 cr)
- or **WRIT 3121** - Advanced Writing: Business and Organizations (3.0 cr)
- **LSBE 3000** - Career Development for the Business Professional (1.0 cr)
Management Information Systems Minor
Finance & Management Information Sciences
Labovitz School of Business and Economics

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12 to 30

The MIS minor provides a general overview of the design, implementation and management of information systems in business.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
The management information systems minor is available to LSBE and non-LSBE students.

Program Sub-plans
Students are required to complete one of the following sub-plans.

MIS Minor for BBA/BAcc Students

Group A Requirement (6 cr)
- MIS 3220 - Database Management and Design (3.0 cr)
- MIS 4223 - Systems Analysis and Design (3.0 cr)

Group B Requirement (6 cr): Electives
Take exactly 6 credit(s) from the following:
- MIS 3224 - Data Communications and Computer Networks (3.0 cr)
- MIS 3232 - Computer Programming for Business (3.0 cr)
- MIS 4220 - Medical Informatics (3.0 cr)
- MIS 4221 - XML and Information Management (3.0 cr)

MIS Minor for Non-LSBE Students
An overall and UM GOA of 2.60 and 2.0 in LSBE courses and completion of the pre-minor core are required for automatic admission to this minor. Students with GPAs between 2.00 and 2.59 should consult with the LSBE Advising and Academic Services Office.

Non-LSBE Students Pre-Minor Core (15 - 18 cr)
Students are encouraged to complete ECON 1022 and 1023 as pre-minor core prerequisites.
- ACCT 2001 - Principles of Financial Accounting (3.0 cr)
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
- MIS 2201 - Information Technology in Business (3.0 cr)
- MGTS 1101 - Introduction to Business [LE CAT8] (3.0 cr)
- ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
  or ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Group A Requirement (6 cr)
- MIS 3220 - Database Management and Design (3.0 cr)
- MIS 4223 - Systems Analysis and Design (3.0 cr)
Group B Requirement (6 cr): Electives
Take exactly 6 credit(s) from the following:
- MIS 3224 - Data Communications and Computer Networks (3.0 cr)
- MIS 3232 - Computer Programming for Business (3.0 cr)
- MIS 4220 - Medical Informatics (3.0 cr)
- MIS 4221 - XML and Information Management (3.0 cr)
Duluth Campus
Management Minor
Management Studies
Labovitz School of Business and Economics

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 12 to 30

The management minor provides a general overview of theories and practices which adds value to the business education of students.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
• 2.60 already admitted to the degree-granting college
• 2.60 transferring from another University of Minnesota college
• 2.60 transferring from outside the University

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
The management minor is available to LSBE and Non-LSBE students.

Program Sub-plans
Students are required to complete one of the following sub-plans.

Organizational Management for BBA/BAcc Students
B.Acc./B.B.A. candidates may wish to supplement their major coursework by completing a program-specific minor. (The general business administration minor, composed of the LSBE core, is not available to LSBE students.) Forms for declaring the minor are available in 111A Labovitz School of Business and Economics Building and may be submitted with the application for candidacy or any time after formal admission to a degree program.

Required Courses (12 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)

Group A
Courses must be from 2 different categories.
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
Take 0 or more course(s) from the following:
• MGTS 4411 - High Performance Organization Design and Transformation (3.0 cr)
• MGTS 4295 - Special Macro Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• MGTS 4431 - Leadership Studies (3.0 cr)
• MGTS 4451 - Management Inquiry (3.0 cr)
• MGTS 4195 - Micro Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• MGTS 4461 - Business Ethics (3.0 cr)
• MGTS 4463 - Sustainability and Sustainable Management (3.0 cr)

Group B
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
• One MGTS 44xx course
• MGTS 4395 - Process Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• MGTS 4931 - Family Business Management (3.0 cr)
Organizational Management for Non-LSBE Students

Non-LSBE Students Pre-Minor Core (15 - 18 cr)
Students are encouraged to complete ECON 1022 and 1023 as pre-minor core prerequisites.

ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
MGTS 1101 - Introduction to Business [LE CAT8] (3.0 cr)
ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
or ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Required Courses (12 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)

Group A
Courses must be from 2 different categories.
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
Take 0 or more course(s) from the following:
• MGTS 4411 - High Performance Organization Design and Transformation (3.0 cr)
• MGTS 4295 - Special Macro Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• Take 0 or more course(s) from the following:
  • MGTS 4431 - Leadership Studies (3.0 cr)
  • MGTS 4451 - Management Inquiry (3.0 cr)
  • MGTS 4195 - Micro Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• Take 0 or more course(s) from the following:
  • MGTS 4461 - Business Ethics (3.0 cr)
  • MGTS 4463 - Sustainability and Sustainable Management (3.0 cr)

Group B
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
• One MGTS 44xx course
• MGTS 4395 - Process Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• MGTS 4931 - Family Business Management (3.0 cr)

Human Resource Management for BAA/BAcc Students
B.Acc./B.B.A. candidates may wish to supplement their major coursework by completing a program-specific minor. (The general business administration minor, composed of the LSBE core, is not available to LSBE students.) Forms for declaring the minor are available in 111A Labovitz School of Business and Economics Building and may be submitted with the application for candidacy or any time after formal admission to a degree program.

Requirements (12 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
• MGTS 4821 - Staffing Work Organizations (3.0 cr)
• MGTS 4831 - Compensation Systems (3.0 cr)
• MGTS 4841 - Training and Development (3.0 cr)
• MGTS 4851 - Labor Relations (3.0 cr)
• MGTS 4861 - International Human Resource Management (3.0 cr)
• MGTS 4871 - Strategic Human Resource Management (3.0 cr)
• MGTS 4881 - Human Resource Issues and Trends (3.0 cr)
• MGTS 4895 - Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)

Human Resources Management for Non-LSBE Students

Non-LSBE Students Pre-Minor Core (15 - 18 cr)
Students are encouraged to complete ECON 1022 and 1023 as pre-minor core prerequisites.

ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
MGTS 1101 - Introduction to Business [LE CAT8] (3.0 cr)
ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
or ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Requirements (12 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
Take at most 9 credit(s) from the following:
• MGTS 4821 - Staffing Work Organizations (3.0 cr)
• MGTS 4831 - Compensation Systems (3.0 cr)
• MGTS 4841 - Training and Development (3.0 cr)
• MGTS 4851 - Labor Relations (3.0 cr)
• MGTS 4861 - International Human Resource Management (3.0 cr)
• MGTS 4871 - Strategic Human Resource Management (3.0 cr)
• MGTS 4881 - Human Resource Issues and Trends (3.0 cr)
• MGTS 4895 - Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
Marketing Analytics B.B.A.

Labovitz School of Business and Economics

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 98
- This program requires summer terms.
- Degree: Bachelor of Business Administration

Marketing analytics is the study of people's shopping and consumption behavior to uncover their tastes and preferences, and to identify any behavioral patterns. Students learn about the application of statistical techniques to large databases to convert data into information and actionable knowledge. Analytics can also be used to study organizational purchase and sales data and can provide critical and timely input to managerial decision making.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 60 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

Students will need to apply for admission into the major. Admissions will be based on an interview and review of previous academic record.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory course (1 cr)
Not required for transfer students with 30 or more credits, or for students who change college to LSBE
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Pre-major requirements (37 cr)
- ACCT 2001 - Principles of Financial Accounting (3.0 cr)
- ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
- BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
- ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
- MIS 2201 - Information Technology in Business (3.0 cr)
- LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
- PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
- WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)
- MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
  - or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
  - or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (6.0 cr)
- COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
  - or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
- or LSBE students are encouraged to take at least one year of a college-level foreign language (See LSBE Advising and Academic Services Office.)
General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled, including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. LSBE students are encouraged to take at least one year of college-level foreign language.
2. 50% of all required business credits, including the upper division economics elective, must be taken from LSBE faculty.
3. Students must complete a minimum of 30 credits while enrolled in LSBE.
4. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

LSBE Core Courses (18 cr)
- MGTS 3301 - Production and Operations Management (3.0 cr)
- FIN 3601 - Corporate Finance (3.0 cr)
- MGTS 3401 - Organizational Behavior and Management (3.0 cr)
- MGTS 3801 - Human Resource Management (3.0 cr)
- MGTS 4481 - Strategic Management (3.0 cr)
- MKTG 3701 - Principles of Marketing (3.0 cr)

Marketing Analytics (21 cr)
- ECON 4040 - Econometrics II (3.0 cr)
- MIS 3220 - Database Management and Design (3.0 cr)
- MKTG 3711 - Marketing Research (3.0 cr)
- MKTG 3761 - Marketing Analytic I: Introduction to Marketing Metrics and Fundamental Analytic Techniques (3.0 cr)
- MKTG 3767 - Marketing Analytics Summer Internship (1.0 - 6.0 cr)
- MKTG 4731 - Consumer Behavior (3.0 cr)
- MKTG 4762 - Marketing Analytics II: Advanced Metrics and Analytic Techniques (3.0 cr)
- MKTG 4763 - Marketing Analytics Practicum (2.0 cr)

Supporting Courses (17 cr)
In addition to the economics and international requirements listed below, complete upper division (3xxx or above) non-LSBE courses, for a total of 17 credits of supporting courses. NOTE: PSY 3020, SOC 3155, STAT 3411, or STAT 3611 cannot be used to fulfill this requirement. Up to 12 credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

Economics Requirement
Take exactly 1 course(s) from the following:
- ECON 3xxx
- ECON 4xxx

International Requirement
Take exactly 1 course(s) from the following:
- ACCT 4505 - International Accounting (3.0 cr)
- AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
• ECON 3150 - Development Economics (3.0 cr)
• ECON 3402 - Global Economic Issues (3.0 cr)
• ECON 4410 - International Economics (3.0 cr)
• ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
• ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
• FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
• FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
• FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
• FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
• GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
• GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
• HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
• HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
• MGTS 4474 - International Management (3.0 cr)
• MGTS 4861 - International Human Resource Management (3.0 cr)
• MKTG 4774 - International Marketing (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3456 - International Security: War and More (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4017 - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)

Advanced Writing and Professional Development Requirement (4 cr)

WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
or BCOM 3141 - Business Communications (3.0 cr)

LSBE 3000 - Career Development for the Business Professional (1.0 cr)
Marketing Analytics Minor

Marketing Labovitz School of Business and Economics

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 41 to 45
- This program requires summer terms.

Marketing analytics is the systematic study of customer data to optimize customer utility, while simultaneously improving the return on marketing and business investments. The term analytics refers to the application of statistical techniques to large databases to convert data into information and actionable recommendations. Analytics can also be used to study an organization's purchase and sale data to understand the value of different customer segments and create more accurate customer response and demand forecasting models. Analytics can provide critical and timely input to managerial decision making to make it more data driven and, ultimately, more effective.

LSBE's minor in marketing analytics for non-LSBE students is designed for students with strong mathematics and statistics backgrounds. The marketing analytics minor builds upon these quantitative skills and develops data analysis skills and business knowledge.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

Students will need to apply for admission into the Retail Marketing Analytics Program to pursue this minor. Admission will be based on interviews and review of previous academic record, particularly students' quantitative courses.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Pre-Minor Core (17-21 cr)

**Math**
- MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

**Computer Science/IT**
- CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
- or MIS 2201 - Information Technology in Business (3.0 cr)

**Accounting**
- ACCT 2001 - Principles of Financial Accounting (3.0 cr)

**Economics/Statistics**
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
- or PSY 3020 - Statistical Methods (4.0 cr)
- or SOC 3155 - Quantitative Research Methods and Analysis (4.0 cr)
- or STAT 1411 - Introduction to Statistics [LE CAT2, LOGIC & QR] (3.0 cr)
- or STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
- or STAT 3411 - Engineering Statistics (3.0 cr)
- or STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

**Economics**
- ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
- or ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- or ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Minor Requirements
LSBE Upper Division (3 cr)
- MKTG 3701 - Principles of Marketing (3.0 cr)
Marketing Analytics (21 cr)

**Group A (6 cr)**

- MKTG 3711 - Marketing Research (3.0 cr)
- MKTG 4731 - Consumer Behavior (3.0 cr)

**Group B (9 cr)**

- MKTG 3761 - Marketing Analytic I: Introduction to Marketing Metrics and Fundamental Analytic Techniques (3.0 cr)
- MKTG 3767 - Marketing Analytics Summer Internship (1.0 - 6.0 cr)
- MKTG 4762 - Marketing Analytics II: Advanced Metrics and Analytic Techniques (3.0 cr)
- MKTG 4763 - Marketing Analytics Practicum (2.0 cr)

**Group C (6 cr)**

- MIS 3220 - Database Management and Design (3.0 cr)
- ECON 4040 - Econometrics II (3.0 cr)
  or STAT 5411 - Analysis of Variance (3.0 cr)
  or STAT 5511 - Regression Analysis (3.0 cr)
Program Type: Baccalaureate
Requirements for this program are current for Fall 2018
Required credits to graduate with this degree: 120
Required credits within the major: 107
Degree: Bachelor of Business Administration

Marketing & Graphic Design (MGD) combines knowledge and skills from two complementary domains: marketing and graphic design. Students enrolled in this major will get a broad exposure to the fundamentals of business and economics. In addition, they will receive specialized training in marketing and creative design. The degree enables graduates to work effectively in industry-standard creative teams, moving from empirically identifying and measuring consumer needs and desires to the design of effective promotional graphic systems and materials. Students enrolled in BBA-MGD will not be eligible to major or minor in marketing because of the curriculum overlap.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 11 courses before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
• 2.60 already admitted to the degree-granting college
• 2.60 transferring from another University of Minnesota college
• 2.60 transferring from outside the University

Students will need to apply for admission into the major. Admissions will be based on interviews and review of previous academic record. Once admitted, students should meet the Apple MacBook Pro requirement for taking graphic design courses.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Introductory Course (1 cr)
Not required for transfer students with 30 or more credits, or for students who change college into LSBE.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

Pre-major Requirements (33 cr)

ACCT 2001 - Principles of Financial Accounting (3.0 cr)
BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)

Communications or Foreign Language
LSBE students are encouraged to take at least one year of a college-level foreign language. (See Students Affairs)
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)

Math
MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. LSBE students are encouraged to take at least one year of college-level foreign language.

2. 50% of all required business credits, including the upper-division economics elective, must be taken from LSBE faculty.

3. Students must complete a minimum of 30 credits while enrolled in LSBE.

4. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

Arts/Design Lower Division (15 cr)
ART 1011 - 2-D Design (3.0 cr)
ART 1013 - 2-D Digital Design (3.0 cr)
ART 1900 - Visual Literacy [LE CAT9, FINE ARTS] (3.0 cr)
ART 2905 - Design Technology I (3.0 cr)
ART 2907 - Typography I (3.0 cr)

LSBE Core (18 cr)
MGTS 3301 - Production and Operations Management (3.0 cr)
FIN 3601 - Corporate Finance (3.0 cr)
MGTS 3401 - Organizational Behavior and Management (3.0 cr)
MGTS 3801 - Human Resource Management (3.0 cr)
MGTS 4481 - Strategic Management (3.0 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)

Marketing Group A (9 cr)
MKTG 3711 - Marketing Research (3.0 cr)
MKTG 4721 - Advertising and Marketing Communications (3.0 cr)
MKTG 4731 - Consumer Behavior (3.0 cr)

Marketing Electives Group B (9 cr)
MKTG 3711, 3761, 3767, 4721, 4731, 4762, 4763 may not be used to fulfill this requirement.
Take 9 or more credits from the following:
MKTG 37xx
or MKTG 47xx
or FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
or FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)

Arts/Design Electives Group C (12 cr)
Take 12 or more credit(s) from the following:
• ART 2906 - Design Technology II (3.0 cr)
• ART 2911 - Graphic Design I (3.0 cr)
• ART 3922 - Graphic Design II (3.0 cr)
• ART 3933 - Graphic Design III (3.0 cr)
• ART 3937 - Typography II (3.0 cr)
• ART 4908 - Interactive Design I (3.0 cr)

Supporting Courses (7 cr)
Seven credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

Economics or Non-LSBE Requirement
Take one Economics 3xxx or 4xxx course or any other non-LSBE course.

International Requirement
Take exactly 1 course(s) from the following:
• ACCT 4505 - International Accounting (3.0 cr)
• AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
• ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
• ANTH 3632 - Latin American Cultures (3.0 cr)
• ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
• ECON 3150 - Development Economics (3.0 cr)
• ECON 3402 - Global Economic Issues (3.0 cr)
• ECON 4410 - International Economics (3.0 cr)
• ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
• ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
• FIN 3649 - International Finance (3.0 cr)
• FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
• FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
• FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
• FST 4229 - INTB 4211 Innovation in Ireland [GLOBAL PER] [GLOBAL PER] (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
• GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
• HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
• HIST 3243 - Europe in Crisis in the 20th Century (4.0 cr)
• HIST 3244 - Holocaust & Genocide in Europe in the 20th Century (4.0 cr)
• HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
• HIST 3386 - The United States and the World since 1898 (4.0 cr)
• HIST 3615 - Modern Africa (4.0 cr)
• HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
• HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
• HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
• MGTS 4474 - International Management (3.0 cr)
• MGTS 4861 - International Human Resource Management (3.0 cr)
• MKTG 4774 - International Marketing (3.0 cr)
• POL 3451 - Theories of International Relations (4.0 cr)
• POL 3517 - Western European Political Systems (4.0 cr)
• POL 3570 - Politics of Developing Nations (3.0 cr)
• SOC 3945 - Social Stratification (3.0 cr)
• SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
• SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
• SPAN 4017 - Latin American Cinema and Culture [FINE ARTS] (4.0 cr)
• SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
• SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
• WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
• WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
• WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
• WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)

Advanced Writing Requirement (3 cr)
BCOM 3141 - Business Communications (3.0 cr)
or WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)
Marketing B.B.A.
Labovitz School of Business and Economics

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 98
• Degree: Bachelor of Business Administration

This professionally-oriented program emphasizes the competencies required for management careers in business, government, public, or social service organizations. The program prepares students for entering careers with management responsibility by providing breadth and depth of knowledge about organizations, management fundamentals, techniques, processes, and skills, combined with a foundation in the functional areas of accounting, business law, finance, information systems, operations, and human resource management.

The BBA offers a broad educational experience, while preparing students for a variety of technical and management careers. With about one-half of the required coursework from non-business disciplines, emphasis is on the development of a strong liberal arts education that provides a foundation for the required and elective professional courses. The program's core curriculum focuses on the fundamental administrative and functional skills demanded of leaders in today's public and private organizations. Students are permitted sufficient latitude in choosing electives appropriate for their particular professional objectives in finance, human resource management, organizational management, management information systems, or marketing.

Marketing is about facilitating exchanges. For an organization to be successful, it must understand the customer and the customer's needs. An organization seeks to meet these needs in a competitive environment by developing a marketing mix of product and service, price, promotion, and distribution that will satisfy the customer's and organization's objectives. Marketing occurs between organizations (business-to-business marketing), between organizations and consumers (consumer marketing), globally (international marketing), between profit and not-for-profit organizations, and even between individuals. Many careers are available in marketing, including those in marketing research, selling and sales management, advertising, promotion and public relations, and international marketing.

In addition to classroom-based courses, students may participate in Student to Business Initiative (SBI) projects or internship programs where classroom learning may be applied during professional experience as an employee of a public agency or private business.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
• 2.60 already admitted to the degree-granting college
• 2.60 transferring from another University of Minnesota college
• 2.60 transferring from outside the University

Freshmen and transfer students are typically admitted as pre-business students for all BBA majors. Admission to candidacy status, which allows access to upper division LSBE classes, typically occurs at the junior level when students have successfully completed all pre-major (pre-candidacy) course requirements and met all of the GPA standards. Students with 2.60 UM and overall, and 2.00 internal and pre-major GPAs, are admitted upon completion of pre-major courses; students with 2.00-2.59 UM and overall, and 2.00 internal and pre-major GPAs, are pooled and reviewed for evidence of academic success in LSBE majors.

Students who do not qualify for admission to candidacy may not take upper division LSBE courses (excluding some economics courses) without permission from the director of Student Affairs.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory course (1 cr)
Not required for transfer students with 30 or more credits, or for students who change college to LSBE.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)
Pre-major requirements (37 cr)
- ACCT 2001 - Principles of Financial Accounting (3.0 cr)
- ACCT 2002 - Principles of Managerial Accounting (3.0 cr)
- BLAW 2001 - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
- ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)
- ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
- MIS 2201 - Information Technology in Business (3.0 cr)
- LSBE 2000 - Interpersonal and Teamwork Skills (1.0 cr)
- PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
- WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)
- MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)
  or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
  or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Communications or Foreign Languages
- COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
  or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)
  or LSBE students are encouraged to take at least one year of a college-level foreign language. (See LSBE Advising and Academic Services Office)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. LSBE students are encouraged to take at least one year of college-level foreign language.
2. 50% of all required business credits, including the upper-division economics elective, must be taken from LSBE faculty.
3. Students must complete a minimum of 30 credits while enrolled in LSBE.
4. No more than 9 credits (3 courses) pertaining to a specific major may be taken abroad, unless an exception is approved by petition.

LSBE Core (18 cr)
- FIN 3601 - Corporate Finance (3.0 cr)
- MGTS 3301 - Production and Operations Management (3.0 cr)
- MGTS 3401 - Organizational Behavior and Management (3.0 cr)
- MGTS 3801 - Human Resource Management (3.0 cr)
- MGTS 4481 - Strategic Management (3.0 cr)
- MKTG 3701 - Principles of Marketing (3.0 cr)

Marketing Group A (9 cr)
- MKTG 3711 - Marketing Research (3.0 cr)
MKTG 4731 - Consumer Behavior (3.0 cr)
MKTG 4781 - Marketing Management and Strategy (3.0 cr)

Marketing Group B (12 cr)

Students may take either FST 4225 OR FST 4295, but not both, for credit within this requirement. MKTG 3701, 3711, 4731 and 4781 may not be used to fulfill this requirement. A maximum of 3 credits of MKTG 3797 may be applied to Group B; additional internship credits may be applied to supporting courses.

Take 4 or more course(s) totaling 12 or more credit(s) from the following:

- FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
- FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
- MKTG 37xx
- MKTG 47xx

Supporting Courses (17 cr)

In addition to economics and international requirements listed below, you may complete up to 3 credits of additional internship credits and upper division (3xxx or above) non-LSBE courses, for a total of 17 credits of supporting courses. NOTE: PSY 3020, STAT 3611 and SOC 3155 are equivalent to ECON 2030, and cannot be used to fulfill these requirements. Up to 12 credits from a LSBE second major or a LSBE minor, may be applied to this requirement.

Economics Requirement

Take exactly 1 course(s) from the following:

- ECON 3xxx
- ECON 4xxx

International Requirement

Take exactly 1 course(s) from the following:

- ACCT 4505 - International Accounting (3.0 cr)
- AMIN 3410 - Fur Trade in Canada and the United States [CDIVERSITY] (3.0 cr)
- ANTH 3628 - Women in Cross-Cultural Perspective (3.0 cr)
- ANTH 3632 - Latin American Cultures (3.0 cr)
- ANTH 3638 - Peoples and Cultures of the Middle East (3.0 cr)
- ECON 3150 - Development Economics (3.0 cr)
- ECON 3402 - Global Economic Issues (3.0 cr)
- ECON 4410 - International Economics (3.0 cr)
- ENGL 3501 - British Literature I [HUMANITIES] (4.0 cr)
- ENGL 3502 - British Literature II [HUMANITIES] (4.0 cr)
- FIN 3649 - International Finance (3.0 cr)
- FR 4412 - Contemporary French Culture and Society [HUMANITIES, GLOBAL PER] (4.0 cr)
- FR 4422 - 20th-Century Novel [HUMANITIES] (4.0 cr)
- FST 4225 - INTB 4201, Chinese Business and Economics (3.0 cr)
- FST 4295 - INTB 4211 Innovation in Ireland (GLOBAL PER) [GLOBAL PER] (3.0 cr)
- GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
- GER 4302 - German Women Writers and Filmmakers [HUMANITIES] (4.0 cr)
- GER 4305 - German Cinema [HUMANITIES] (4.0 cr)
- GER 4404 - Contemporary Germany [HUMANITIES, GLOBAL PER] (4.0 cr)
- HCM 4560 - International Comparisons of Health Care Systems (3.0 cr)
- HIST 3264 - Russian Empire under the Tsars: Russia under the Romanovs from Peter the Great to Lenin (4.0 cr)
- HIST 3386 - The United States and the World since 1898 (4.0 cr)
- HIST 3615 - Modern Africa (4.0 cr)
- HIST 3616 - Society and Culture in 20th-Century Africa (4.0 cr)
- HIST 3726 - Modern Middle East: 18th Century-Present (4.0 cr)
- HIST 3825 - Islamic History from Muhammad to the Ottomans (4.0 cr)
- MGTS 4474 - International Management (3.0 cr)
- MGTS 4861 - International Human Resource Management (3.0 cr)
- MKTG 4774 - International Marketing (3.0 cr)
- POL 3451 - Theories of International Relations (4.0 cr)
- POL 3456 - International Security: War and More (4.0 cr)
- POL 3517 - Western European Political Systems (4.0 cr)
- POL 3570 - Politics of Developing Nations (3.0 cr)
- SOC 3945 - Social Stratification (3.0 cr)
- SPAN 3042 - Civilization, Cultures and Culture Communities in Latin America [HUMANITIES, GLOBAL PER] (4.0 cr)
- SPAN 3044 - Civilization, Cultures and Communities of Spain [HUMANITIES, GLOBAL PER] (4.0 cr)
- SPAN 4011 - Latin American Prose [HUMANITIES] (4.0 cr)
- SPAN 4018 - Latin America From Within [HUMANITIES] (4.0 cr)
- SPAN 4027 - Contemporary Literature and Culture of Spain [HUMANITIES] (4.0 cr)
- WS 3000 - Transnational Perspectives on Feminism [SOC SCI, GLOBAL PER] (3.0 cr)
- WS 3001 - Gender Relations in the Global South [GLOBAL PER] (3.0 cr)
- WS 3002 - Latin American Women: Culture and Politics (3.0 cr)
- WS 3400 - Women and Film [GLOBAL PER] (3.0 cr)

Advanced Writing and Professional Development Requirement (4 cr)

BCOM 3141 - Business Communications (3.0 cr)

or WRIT 3121 - Advanced Writing: Business and Organizations (3.0 cr)

LSBE 3000 - Career Development for the Business Professional (1.0 cr)
Duluth Campus
Marketing Minor
Labovitz School of Business and Economics

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 12 to 30

The minor in marketing is about facilitating exchanges.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
A GPA above 2.0 is preferred for the following:
- 2.60 already admitted to the degree-granting college
- 2.60 transferring from another University of Minnesota college
- 2.60 transferring from outside the University

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
The marketing minor is available to LSBE and non-LSBE students.

Program Sub-plans
Students are required to complete one of the following sub-plans.

Marketing Minor for BBA/BAcc Students
Prerequisite (3 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)
Electives (9 cr)
MKTG 3701, 3761, 3767, 4762 and 4763 may not be used to fulfill this requirement.
Take exactly 9 credit(s) from the following:
• MKTG 37xx
• MKTG 47xx

Marketing Minor for non-LSBE Students
An overall and UM GPA of 2.60 and 2.00 in LSBE courses and completion of the pre-minor core are required for automatic admission to this minor. Students with GPAs between 2.00 and 2.59 should consult with the LSBE Advising and Academic Services Office.

Non-LSBE Students Pre-Minor Core (15 - 18 cr)
Students are encouraged to complete ECON 1022 and 1023 as pre-minor core prerequisites.
ACCT 2001 - Principles of Financial Accounting (3.0 cr)
ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)
MIS 2201 - Information Technology in Business (3.0 cr)
MGTS 1101 - Introduction to Business [LE CAT8] (3.0 cr)

Economics
ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
or ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Prerequisite (3 cr)
MKTG 3701 - Principles of Marketing (3.0 cr)
Electives (9 cr)
MKTG 3701, 3761, 3767, 4762 and 4763 may not be used to fulfill this requirement.
Take exactly 9 credit(s) from the following:

- MKTG 37xx
- MKTG 47xx
Duluth Campus
Sustainable Business and Organization Minor
Management Studies
Labovitz School of Business and Economics

• Program Type: Undergraduate free-standing minor
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 12

The sustainable business and organization minor is an interdisciplinary minor, which will complement any LSBE major. Sustainability is an approach to business in which business goals are aligned with social and environmental goals. Opportunities for 21st century managers require, in addition to traditional business skills, understanding of increasingly complex social, environmental, and governance issues. Sustainability careers span a broad set of options in large companies, startups, nonprofits, and government entities.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 45 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
• 2.60 already admitted to the degree-granting college
• 2.60 transferring from another University of Minnesota college
• 2.60 transferring from outside the University

Bachelor of Business Administration (BBA) or Bachelor of Accounting (BAc) candidate.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Minor Requirements
Minor Requirements (12 cr)

Group A
MGTS 4463 - Sustainability and Sustainable Management (3.0 cr)

Group B
Take 1 or more course(s) from the following:
• ACCT 4510 - Fund and Not-For-Profit Accounting (3.0 cr)
• MKTG 3710 - Green Marketing (3.0 cr)

Group C
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
• One other course from Group B
• ECON 3721 - Natural Resource and Energy Economics (3.0 cr)
• ECON 3777 - Environmental Economics (3.0 cr)
• MGTS 4941 - Social Entrepreneurship (3.0 cr)
• MGTS 4951 - Environmental Entrepreneurship (3.0 cr)
• MKTG 4710 - Marketing for Non-Profits (3.0 cr)
Duluth Campus

Aerospace Studies Minor

Aerospace Studies

Swenson College of Science and Engineering

• Program Type: Undergraduate free-standing minor
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 37 to 41

The Air Force Reserve Officer Training Corps (AFROTC) is a college-level educational program that gives students the opportunity to become Air Force officers while completing their degrees. Any student may enroll in aerospace studies courses. AFROTC offers post-collegiate opportunities in more than 100 career specialties. Air Force officers are challenged with organizational responsibilities and experiences not often available to new college graduates. This program is for students who want to challenge themselves as Air Force leaders and managers while serving their country in a professional, high-tech environment.

Active-duty Air Force officers provide a curriculum that gives students insight into the mission, organization, and operation of the U.S. Air Force. Students study Air Force history, leadership, management, professionalism, and U.S. foreign policy and its relationship to defense policy. Scholarships are available on a competitive basis. High school seniors and college students can compete for four-, three-, and two-year scholarships that cover tuition, fees, and book expenses. Participants may qualify to receive a tax-free allowance for each month in school.

The aerospace studies minor provides preparation in areas studied by most officers early in their service careers. The minor increases future officers' performance potential in two areas in which all officers must eventually develop competence: communication skills and international affairs.

Program Delivery

This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements

Lower Division (11 - 14 cr)

ROTC Lead Lab
Air 1000, must be taken while enrolled in ROTC. May be taken one to four times. 1 credit each completion.
Take 1 - 4 credit(s) from the following:
• AIR 1000 - AFROTC GMC Lead Lab (1.0 cr)

ROTC Core
AIR 1101 - Foundations of the U.S. Air Force (1.0 cr)
AIR 1102 - Foundations of the U.S. Air Force (1.0 cr)
AIR 2101 - The Evolution of the U.S. Air Force Air and Space Power (1.0 cr)
AIR 2102 - The Evolution of the U.S. Air Force Air and Space Power (1.0 cr)

Communication
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
or COMM 1222 - Interpersonal Communication [LE CAT3, LECD CAT03, COMM & LAN] (3.0 cr)

Math
Take 3 or more credit(s) from the following:
• MATH 1xxx
• MATH 2xxx

Upper Division (23 cr)

Air 3001 must be taken 4 times, 2 credits each time.
AIR 3001 - AFROTC POC Lead Lab (2.0 cr)
AIR 3101 - Air Force Leadership Studies (3.0 cr)
AIR 3102 - Air Force Leadership Studies (3.0 cr)
AIR 4101 - National Security Affairs, Preparation for Active Duty (3.0 cr)
AIR 4102 - National Security Affairs, Preparation for Active Duty (3.0 cr)

Advanced Writing
WRIT 31xx (3.0 cr)

Electives (3 - 4 cr)
The history and political science courses must be approved by department head.
Take 1 or more course(s) totaling 3 - 4 credit(s) from the following:
- AIR 1591 - Leadership Practicum (1.0 - 4.0 cr)
- AIR 3591 - Leadership Practicum (1.0 - 4.0 cr)
- GEOG 4393 - Political Geography (3.0 cr)
- POL 3xxx
- HIST 2xxx
  or HIST 3xxx
**Duluth Campus**

**Astronomy Minor**

*D Earth & Environmental Sci, UMD-Physics & Astronomy

Swenson College of Science and Engineering

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 33
- None

The astronomy minor enhances students' understanding of the formation, structure, and evolution of the universe while providing a sound foundation for professional programs in the sciences. The minor program covers a wide range of topics in general astronomy, comparative planetology, stellar dynamics, astrophysics, cosmology, and techniques of astronomical observation and analysis.

**Program Delivery**

This program is available:
- via classroom (the majority of instruction is face-to-face)

**Minor Requirements**

**Astronomy Required Courses (23 cr)**

**Astronomy**

- AST 1040 - Introductory Astronomy [LE CAT5, NAT SCI] (3.0 cr)  
  or AST 2050 - General Astronomy [NAT SCI] (3.0 cr)
- AST 4110 - Observational Astronomy (3.0 cr)

**Physics I**

- PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)  
  or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
- PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

**Physics II**

- PHYS 2015 - General Physics II (4.0 cr)  
  or PHYS 2018 - Honors General Physics II (4.0 cr)
- PHYS 2016 - General Physics Lab II (1.0 cr)

**Physics**

- PHYS 2021 - Relativity and Quantum Physics (4.0 cr)
- PHYS 3561 - Astrophysics (3.0 cr)

**Math Requirement (10 cr)**

- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
Duluth Campus
Biochemical Engineering Minor
Chemical Engineering
Swenson College of Science and Engineering

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 46 to 48

Significant advances in the biological sciences and engineering have had a dramatic effect on the environmental, chemical, and health care industries. Chemical engineering programs have become more diversified to include curriculum in biochemical engineering. The biochemical engineering minor provides students with additional training in this growing field beyond their traditional coursework. Students will gain the basic knowledge of the biological sciences and design as applied to bioreactor engineering and downstream processing.

The influence of the biological sciences in all academic disciplines within the sciences and engineering continues to expand. Any student may pursue a minor in biochemical engineering.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Biochemical Engineering Courses
Biology I
- BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)

Chemistry I with lab
- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Chemistry II with lab
- CHEM 1155 - General Chemistry II (4.0 cr)
- CHEM 1156 - General Chemistry Lab II (1.0 cr)

Organic Chemistry I with lab
- CHEM 2541 - Organic Chemistry I (3.0 cr)
- CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)

Organic Chemistry II with lab
- CHEM 2542 - Organic Chemistry II (3.0 cr)
- CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)

Biochemistry
- CHEM 3322 - Biochemistry (3.0 cr)
- CHEM 3324 - Biochemistry Laboratory (1.0 cr)

- or
- CHEM 4351 - Biochemistry I (3.0 cr)
- CHEM 4363 - Biochemistry Laboratory (2.0 cr)

Math
- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Engineering
- CHE 2111 - Material and Energy Balances (3.0 cr)
- or CHE 2211 - Materials and Energy Balances (4.0 cr)

Biochemical Engineering I & II
- CHE 4601 - Biochemical Engineering I (3.0 cr)
- or CHE 5601 - Biochemical Engineering I (3.0 cr)
- CHE 4701 - Biochemical Engineering II (3.0 cr)
- or CHE 5701 - Biochemical Engineering II (3.0 cr)
Duluth Campus
Biochemistry B.A.
Chemistry and Biochemistry
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 68 to 70
- Degree: Bachelor of Arts

Biochemistry is the study of chemical reactions and processes at the molecular level that sustain life. This field is both a life science and a chemical science, exploring the chemistry of living organisms and the molecular basis for the processes that occur in living cells. The Department of Chemistry and Biochemistry provides classroom and laboratory learning opportunities and research experiences across the discipline to meet the needs of students in pre-professional programs, as well as students who wish to pursue careers or graduate studies in biochemistry and related disciplines.

Students who complete the BA in biochemistry do so because it is a field that complements areas such as law, library science, journalism, public relations, sales, or education. The major also provides a strong foundation for students planning on attending professional schools, such as medical, dental or pharmacy school, while providing curricular flexibility to complete professional school prerequisites requirements. BA students are encouraged to participate in undergraduate research.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current students who change from a BS degree or change colleges may request to be waived from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
A minor or second major in a different subject is required. A minor in chemistry cannot be declared with the BA in biochemistry.

**Advanced Writing (3 cr)**
WRIT 31xx Adv Writing (3 cr)

**Biology (16 cr)**
BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
BIOL 2201 - Genetics (3.0 cr)
BIOL 3100 - Cell Biology (3.0 cr)

**Chemistry (30 cr)**
Chemistry I with lab
CHEM 1173 - General Chemistry I for Majors [NAT SCI] (4.0 cr)
CHEM 1174 - General Chemistry I Lab for Majors [NAT SCI] (1.0 cr)
Chemistry II with lab
CHEM 1175 - General Chemistry II for Majors (4.0 cr)
CHEM 1176 - General Chemistry II Lab for Majors (1.0 cr)

**Organic Chemistry**
Organic Chemistry I with lab
CHEM 2541 - Organic Chemistry I (3.0 cr)
CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)
Organic Chemistry II with lab
CHEM 2542 - Organic Chemistry II (3.0 cr)
CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)

**Biochemistry**
CHEM 4351 - Biochemistry I (3.0 cr)
CHEM 4363 - Biochemistry Laboratory (2.0 cr)
CHEM 4352 - Biochemistry II (3.0 cr)

**Chemistry I with lab**
CHEM 1173 - General Chemistry I for Majors [NAT SCI] (4.0 cr)
CHEM 1174 - General Chemistry I Lab for Majors [NAT SCI] (1.0 cr)

**Chemistry II with lab**
CHEM 1175 - General Chemistry II for Majors (4.0 cr)
CHEM 1176 - General Chemistry II Lab for Majors (1.0 cr)

**Mathematics (8 - 10 cr)**
Calculus I
MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
Calculus II or Statistics
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

**Physics (10 cr)**
Physics I Course
PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
PHYS 1002 - Introduction to Physics II (5.0 cr)
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
PHYS 2015 - General Physics II (4.0 cr)
PHYS 2018 - Honors General Physics II (4.0 cr)

Physics I Lab
Students who take PHYS 2013 or 2017 MUST take PHYS 2014 to complete the Physics I requirement.
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Physics II
PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
PHYS 1002 - Introduction to Physics II (5.0 cr)
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
PHYS 2015 - General Physics II (4.0 cr)
PHYS 2018 - Honors General Physics II (4.0 cr)

Physics II Lab
Students who take PHYS 2015 or 2018 MUST take PHYS 2016 to complete the Physics II requirement.
PHYS 2016 - General Physics Lab II (1.0 cr)
Duluth Campus
Biochemistry B.S.
Chemistry and Biochemistry
Swenson College of Science and Engineering

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 120
• Required credits within the major: 86 to 91
• Degree: Bachelor of Science

Biochemistry is the study of life at the molecular level. This field is both a life science and a chemical science, exploring the chemistry of living organisms and the molecular basis for the processes that occur in living cells. The Department of Chemistry and Biochemistry provides classroom and laboratory learning opportunities and research experiences across the discipline to meet the needs of students in engineering, liberal arts, and pre-professional programs, as well as those of students who wish to pursue careers or graduate studies in chemistry or related disciplines.

Honors requirements: The Department of Chemistry and Biochemistry honors program helps outstanding biochemistry and molecular biology majors become competent, independent research workers, encourages student interest in the discipline, and aids in the transition from student to working scientist. Qualified majors may apply after the first semester of their sophomore year. Participants choose a research adviser and complete two semesters on a jointly developed project. Written reports and an oral presentation of the research are also required.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A minor or second major in a different subject is required.
   - A minor in chemistry or BA biochemistry major cannot be declared with the BS biochemistry/molecular biology (BMB).
   - The BA chemistry may be declared as an additional degree with the biochemistry BS. However, this combination does not satisfy the requirement for a minor or a second major in a different subject.
   - The biochemistry BS and BS chemistry may be declared. This combination satisfies the requirement of a minor or second major in a
different subject.

2. Students earning a BS degree who wish to have their degree certified by the American Chemical Society must complete at least 130 hours of additional laboratory work through participation in undergraduate research with a comprehensive written report and/or through additional chemistry laboratory courses.

Year One (30 cr)
High school algebra and high school chemistry are required for CHEM 1173/1174.

This schedule presupposes placement into MATH 1296.
BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)

Chemistry I
CHEM 1173 - General Chemistry I for Majors [NAT SCI] (4.0 cr)
CHEM 1174 - General Chemistry I Lab for Majors [NAT SCI] (1.0 cr)

Chemistry II
CHEM 1175 - General Chemistry II for Majors (4.0 cr)
CHEM 1176 - General Chemistry II Lab for Majors (1.0 cr)

Math
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Year Two (25-26 cr)
BIOL 2201 - Genetics (3.0 cr)
CHEM 2541 - Organic Chemistry I (3.0 cr)
CHEM 2542 - Organic Chemistry II (3.0 cr)
CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)
CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)
or CHEM 2545 - Organic Chemistry II Laboratory for B.S. Chemistry Majors (2.0 cr)

Analytical Chemistry
CHEM 2222 - Quantitative Analysis (3.0 cr)
CHEM 2223 - Quantitative Analysis Laboratory (1.0 cr)
or CHEM 2242 - Analytical Chemistry and the Environment in Poland (4.0 cr)

Physics
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)
PHYS 2015 - General Physics II (4.0 cr)
or PHYS 2018 - Honors General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)

Year Three (21 - 25 cr)
BIOL 3100 - Cell Biology (3.0 cr)
BIOL 4231 - Molecular Biology (3.0 cr)
BIOL 5232 - Molecular Biology Laboratory (2.0 cr)
CHEM 4184 - Undergraduate Seminar I (1.0 cr)
CHEM 4351 - Biochemistry I (3.0 cr)
CHEM 4352 - Biochemistry II (3.0 cr)
CHEM 4363 - Biochemistry Laboratory (2.0 cr)

Physical Chemistry
It is recommended students take CHEM 4634 and 4633
CHEM 4634 - Physical Chemistry (3.0 cr)
CHEM 4633 - Physical Chemistry Laboratory (1.0 cr)
or CHEM 4641 - Physical Chemistry I (3.0 cr)
CHEM 4643 - Physical Chemistry Laboratory I (1.0 cr)
CHEM 4642 - Physical Chemistry II (3.0 cr)
CHEM 4644 - Physical Chemistry Laboratory II (1.0 cr)

Year Four (4 cr)
CHEM 3432 - Descriptive Inorganic Chemistry (3.0 cr)
CHEM 4185 - Undergraduate Seminar II (1.0 cr)

Required Elective (3 cr)
Take 3 or more credit(s) from the following:
• CHEM 4242 - Instrumental Analysis (3.0 cr)
• CHEM 4373 - Physical Biochemistry: Statistical Bio-Thermodynamics (3.0 cr)
• CHEM 4436 - Inorganic Chemistry (3.0 cr)

Advanced Writing (3 cr)
WRIT 31xx Advanced Writing
**Duluth Campus**  
**Biology B.A.**  
**Swenson College of Science and Engineering**

- Program Type: Baccalaureate  
- Requirements for this program are current for Fall 2018  
- Required credits to graduate with this degree: 120  
- Required credits within the major: 70 to 72  
- Degree: Bachelor of Arts

Biology has long been recognized as basic to environment, agriculture, and medicine. Because the topics studied by biologists range from sub-cellular particles to global environmental concerns, and because of the variety of living organisms and the various ways of studying them, many specialties have developed. The BA program provides majors with the necessary background to pursue careers in the diverse areas of life science, including health care professions, and the many careers that provide the interface between science and society.

**Program Delivery**  
This program is available:  
- via classroom (the majority of instruction is face-to-face)

**Admission Requirements**  
For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

**Required prerequisites**  
**Introductory Requirement (1 cr)**  
Transfer students with 24 or more credits and current students who change from a BS degree or change colleges may request to be waived from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.  
**UST 1000 - UMD Seminar (1.0 - 2.0 cr)**

**General Requirements**  
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:  
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.  
2. Students must complete all requirements of the [Liberal Education Program](#).  
3. Students must complete a minimum of 120 semester credits.  
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.  
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.  
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.  
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.  
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

**Program Requirements**  
1. The human biology sub-plan requires a minor or second major from another area of study outside the Department of Biology with the exception of the natural history minor. The life science sub-plan requires a minor or second major from a non-SCSE program.
Biology BA Core Courses (18 cr)

**General Biology I**
- BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)

**General Biology II**
- BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)

**Additional Biology**
- BIOL 2201 - Genetics (3.0 cr)
- BIOL 3987 - Communication in Biology (2.0 cr)

**Ecology**
- BIOL 2410 - Ecology and Evolution (3.0 cr)
- or BIOL 2801 - General Ecology (3.0 cr)
- or BIOL 3401 - Evolution [SUSTAIN] (3.0 cr)

**Chemistry (10 cr)**

**Introduction to Organic and Biological Chem I and II**
- CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
- CHEM 1114 - Introduction to General, Organic, and Biological Chemistry II (5.0 cr)
- or Chemistry I and II with labs
  - CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
  - CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
  - CHEM 1155 - General Chemistry II (4.0 cr)
  - CHEM 1156 - General Chemistry Lab II (1.0 cr)

**Mathematics and Statistics (7 - 9 cr)**

**Mathematics**
- MATH 1250 - Precalculus Analysis [LE CAT2, LOGIC & QR] (4.0 cr)
- or MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1160 - Finite Mathematics and Introduction to Calculus [LE CAT2, LOGIC & QR] (5.0 cr)

**Statistics**
- STAT 1411 - Introduction to Statistics [LE CAT2, LOGIC & QR] (3.0 cr)
- or STAT 24xx or above (3 - 4 cr)
- or PSY 3020 - Statistical Methods (4.0 cr)
- or ECON 2030 - Applied Statistics for Business and Economics [LOGIC & QR] (3.0 cr)

**Advanced Writing Requirement (3 cr)**

- BIOL 3011 can count toward Biology SBE electives if there has been a previous completion of either WRIT 3150 or BIOL 3011.
- WRIT 3150 - Advanced Writing: Science (3.0 cr)
- or BIOL 3011 - Writing for the Duluth Journal of Undergraduate Biology (3.0 cr)

### Program Sub-plans

Students are required to complete one of the following sub-plans.

#### Human Biology

The biology bachelor of arts in human biology is designed to provide the breadth and depth of knowledge required for students entering human health care professions including nursing, dentistry, pharmacy, physician assistant, and the diverse array of health care technician programs. The core courses in biology, chemistry, physics, and mathematics provide a strong foundation for more specialized upper division coursework. Students will complete their degree with upper division electives from the life, physical, and social sciences and humanities to focus their degree toward their professional goals. Please visit the Biology Department webpage http://www.d.umn.edu/biology/ for example plans.

**Human Biology Core (13 cr)**
- BIOL 3100 - Cell Biology (3.0 cr)
- BIOL 3771 - Human Anatomy (4.0 cr)
- BIOL 3772 - Human Physiology (4.0 cr)
- BIOL 2102 - Cell Biology Laboratory (2.0 cr)
- or BIOL 2202 - Genetics Laboratory (2.0 cr)

**Biology BA Electives (6 cr)**

Between the biology electives and additional electives, at least one biology lab course must be included.

#### Cell Biology (CELL)

- BIOL 4361, and 5232 carry a lab component
- Take 2 or more course(s) totaling 6 or more credit(s) from the following:
  - • BIOL 3512 - Biology of HIV and AIDS (3.0 cr)
• BIOL 3101 - Molecular Biology of Cancer (3.0 cr)
• BIOL 3102 - Cell Biology of Human Disease (3.0 cr)
• BIOL 3301 - Patterning the Embryo (3.0 cr)
• BIOL 4199 - Frontiers in Cell Biology (3.0 cr)
• BIOL 4231 - Molecular Biology (3.0 cr)
• BIOL 4361 - Developmental Biology (3.0 cr)
• BIOL 4511 - Medical Microbiology (3.0 cr)
• BIOL 4631 - Plant Cell and Molecular Biology (3.0 cr)
• BIOL 5232 - Molecular Biology Laboratory (2.0 cr)
• BIOL 5511 - Virology (3.0 cr)
• BMS 5545 - Immunology (3.0 cr)

**Additional Electives (12 cr)**
Between the Biology BA Electives and Additional Electives, at least one Biology Lab course must be included. Courses cannot be used to fulfill more than 1 requirement within the major.

Take 12 or more credit(s) from the following:

**Electives**
- BIOL 2571 carries a lab component.
- Take 0 or more course(s) from the following:
  - ANTH 2xxx
  - ANTH 3xxx
  - ANTH 4xxx
  - BIOL 2571 - Microbiology for Human Health (4.0 cr)
  - BMS 5501 - Neurobiochemistry (2.0 cr)
  - BMS 5555 - Molecular Pathogenesis: Current Concepts (3.0 cr)
  - CHEM 2541 - Organic Chemistry I (3.0 cr)
  - CHEM 2542 - Organic Chemistry II (3.0 cr)
  - CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)
  - CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)
  - CHEM 3322 - Biochemistry (3.0 cr)
  - CHEM 3324 - Biochemistry Laboratory (1.0 cr)
  - PSY 3xxx
  - PSY 4xxx
  - SOC 2xxx
  - SOC 3xxx
  - SOC 4xxx

**Physics I Electives**
- Take 0 or more course(s) from the following:

  **Physics I course**
  - PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
  or PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
  or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

  **Physics I lab**
  - PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

  Students who take PHYS 2013 or 2017 MUST take PHYS 2014 to complete the Physics I requirement.

Students who take PHYS 1001 DO NOT have to take PHYS 2014.

  - PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

**Physics II Electives**
- Take 0 or more course(s) from the following:

  **Physics II course**
  - PHYS 1002 - Introduction to Physics II (5.0 cr)
  or PHYS 2015 - General Physics II (4.0 cr)
  or PHYS 2018 - Honors General Physics II (4.0 cr)

  **Physics II lab**
  - PHYS 2016 - General Physics Lab II (1.0 cr)

**Anatomy, Morphology, Physiology Electives (AMP)**
- BIOL 3703 and 4604 carry a lab component
- Take 0 or more course(s) from the following:
  - BIOL 3703 - Animal Physiology (3.0 cr)
  - BIOL 4604 - Plant Physiology (4.0 cr)
  - BIOL 5772 - Neural Systems and Behavior (3.0 cr)

**Cell Biology Electives (CELL)**
- BIOL 4361 and 5232 carry a lab component
- Take 0 or more course(s) from the following:
  - BIOL 3512 - Biology of HIV and AIDS (3.0 cr)
• BIOL 3101 - Molecular Biology of Cancer (3.0 cr)
• BIOL 3102 - Cell Biology of Human Disease (3.0 cr)
• BIOL 3301 - Patterning the Embryo (3.0 cr)
• BIOL 4199 - Frontiers in Cell Biology (3.0 cr)
• BIOL 4361 - Developmental Biology (3.0 cr)
• BIOL 4511 - Medical Microbiology (3.0 cr)
• BIOL 4631 - Plant Cell and Molecular Biology (3.0 cr)
• BIOL 5511 - Virology (3.0 cr)
• BMS 5545 - Immunology (3.0 cr)

• Diversity and Taxonomy Electives (DT)
All courses in this category carry a lab component
Take 0 or more course(s) from the following:
• BIOL 3502 - General Microbiology (4.0 cr)
• BIOL 3601 - Plant Diversity (3.0 cr)
• BIOL 3603 - Plant Taxonomy (3.0 cr)
• BIOL 3701 - Animal Diversity (4.0 cr)
• BIOL 4731 - Entomology (3.0 cr)
• BIOL 4761 - Ichthyology (3.0 cr)
• BIOL 4763 - Ornithology (3.0 cr)
• BIOL 4764 - Mammalogy (3.0 cr)
• BIOL 5515 - Microbial Diversity and Phylogeny (3.0 cr)

• Ecology, Evolution & Behavior Electives (EEB)
BIOL 3761, 3811 and 4839 carry a lab component.
Take 0 or more course(s) from the following:
• BIOL 3401 - Evolution [SUSTAIN] (3.0 cr)
• BIOL 3402 - Evolution in the news (1.0 cr)
• BIOL 3760 - Marine Biology (3.0 cr)
• BIOL 3761 - Field Studies in Marine Biology (4.0 cr)
• BIOL 3811 - Plant Ecology (4.0 cr)
• BIOL 3830 - Aquatic Food Webs (3.0 cr)
• BIOL 3835 - Freshwater Ecology (3.0 cr)
• BIOL 4201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
• BIOL 4233 - Genomics (3.0 cr)
• BIOL 4818 - Biotic Response to Climate Change (3.0 cr)
• BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
• BIOL 4850 - Food and Humans (3.0 cr)
• BIOL 4891 - Animal Behavior (2.0 cr)
• BIOL 4992 - Senior Seminar: Classic Readings in Natural History (1.0 cr)
• BIOL 5201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
• BIOL 5240 - Ecological Genetics (3.0 cr)
• BIOL 5777 - Plankton Biology (2.0 cr)
• BIOL 5801 - Microbial Ecology (2.0 cr)
• BIOL 5805 - Fisheries Ecology and Management (3.0 cr)
• BIOL 5808 - Landscape Ecology: Theory and Application (3.0 cr)
• BIOL 5809 - Ecological Statistics (3.0 cr)
• BIOL 5818 - Biotic Response to Climate Change (3.0 cr)
• BIOL 5833 - Stream Ecology (3.0 cr)
• BIOL 5861 - Lake Ecology (3.0 cr)
• BIOL 5865 - Conservation Biology (2.0 cr)
• BIOL 5870 - Wetland Ecology (3.0 cr)

• Supplemental Biology Electives (SBE)
These courses can be used as additional electives only if they have not been used in the core. 2 cr of SSP 3002 TA Practicum (in Biology) may be substituted for BIOL 3993 as an upper division elective with departmental approval. A maximum of 2 cr BIOL 3993, a maximum of 4 cr BIOL 3994 and a maximum of 1 cr BIOL 3996 may be applied to the degree. BIOL 2102, 2202, and 2802 carry a lab component. BIOL 3011 can count if there has been a previous completion of either WRIT 3150 or BIOL 3011.
Take 0 or more course(s) from the following:
• BIOL 2102 - Cell Biology Laboratory (2.0 cr)
• BIOL 2202 - Genetics Laboratory (2.0 cr)
• BIOL 2802 - Ecology Laboratory (2.0 cr)
• BIOL 3001 - Outreach to the K-12 Science Classroom (3.0 cr)
• BIOL 3011 - Writing for the Duluth Journal of Undergraduate Biology (3.0 cr)
• BIOL 3993 - Laboratory Teaching Experience (1.0 - 2.0 cr)
• BIOL 3994 - Undergraduate Research (1.0 - 3.0 cr)
• BIOL 3996 - Internship in Biology (1.0 - 2.0 cr)
• BIOL 5001 - Teaching and Learning in the Life Sciences (1.0 cr)
• Social Science, Business & Humanities Electives (SBH)
  Take 0 or more course(s) from the following:
  • ANTH 1602 - Biological Anthropology and Archaeology [LE CAT7, LEIP CAT07, SOC SCI] (4.0 cr)
  • ECON 1003 - Economics and Society [LE CAT8, SOC SCI] (3.0 cr)
  • HIST 2350 - Nutrition and American History [HUMANITIES, SUSTAIN] (4.0 cr)
  • MGTS 1101 - Introduction to Business [LE CAT8] (3.0 cr)
  • PHIL 1003 - Ethics and Society [LE CAT8, LEIP CAT08, HUMANITIES, CDIVERSITY] (3.0 cr)
  • PSY 1003 - General Psychology [LE CAT6, SOC SCI] (4.0 cr)
  • PSY 2021 - Developmental Psychology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)
  • PSY 3121 - Abnormal Psychology (4.0 cr)
  • SOC 1101 - Introduction to Sociology [LE CAT6, LECD CAT06, SOC SCI, CDIVERSITY] (4.0 cr)

Life Sciences
The life sciences sub-plan is for students whose educational and career objectives can best be met by integrating a strong biology background with courses from multiple departments in order to complete a second major or minor outside the Swenson College of Science and Engineering. Please visit the Biology Department webpage http://www.d.umn.edu/biology/ for example plans.

Life Science Core Courses (5 cr)
  BIOL 2110 - Cell and Molecular Biology (3.0 cr)
  or BIOL 3100 - Cell Biology (3.0 cr)
  BIOL 2102 - Cell Biology Laboratory (2.0 cr)
  or BIOL 2202 - Genetics Laboratory (2.0 cr)
  or BIOL 2802 - Ecology Laboratory (2.0 cr)

Biology BA Elective Categories (26 cr)
Courses cannot be used to fulfill more than 1 requirement in the major. Must include a minimum of 17 credits BIOL 3xxx or above and 3 biology lab courses.

Take 26 or more credit(s) from the following:

Anatomy, Morphology, Physiology (AMP)
  BIOL 3703, 3771, 3772 and 4604 carry a lab component.
  Take 0 or more course(s) from the following:
  • BIOL 3703 - Animal Physiology (3.0 cr)
  • BIOL 3771 - Human Anatomy (4.0 cr)
  • BIOL 3772 - Human Physiology (4.0 cr)
  • BIOL 4604 - Plant Physiology (4.0 cr)
  • BIOL 5772 - Neural Systems and Behavior (3.0 cr)

Cell Biology (CELL)
  BIOL 4361, and 5232 carry a lab component.
  Take 1 or more course(s) totaling 3 or more credit(s) from the following:
  • BIOL 3512 - Biology of HIV and AIDS (3.0 cr)
  • BIOL 3100 - Cell Biology (3.0 cr)
  • BIOL 3101 - Molecular Biology of Cancer (3.0 cr)
  • BIOL 3102 - Cell Biology of Human Disease (3.0 cr)
  • BIOL 3301 - Patterning the Embryo (3.0 cr)
  • BIOL 4199 - Frontiers in Cell Biology (3.0 cr)
  • BIOL 4361 - Developmental Biology (3.0 cr)
  • BIOL 4511 - Medical Microbiology (3.0 cr)
  • BIOL 4631 - Plant Cell and Molecular Biology (3.0 cr)
  • BIOL 5232 - Molecular Biology Laboratory (2.0 cr)
  • BIOL 5511 - Virology (3.0 cr)
  • BMS 5545 - Immunology (3.0 cr)

Diversity and Taxonomy (DT)
  All courses in this category carry a lab component.
  Take 1 or more course(s) totaling 3 or more credit(s) from the following:
  • BIOL 3502 - General Microbiology (4.0 cr)
  • BIOL 3601 - Plant Diversity (3.0 cr)
  • BIOL 3603 - Plant Taxonomy (3.0 cr)
  • BIOL 3701 - Animal Diversity (4.0 cr)
  • BIOL 4731 - Entomology (3.0 cr)
  • BIOL 4761 - Ichthyology (3.0 cr)
  • BIOL 4763 - Ornithology (3.0 cr)
  • BIOL 4764 - Mammalogy (3.0 cr)
  • BIOL 5515 - Microbial Diversity and Phylogeny (3.0 cr)

Ecology, Evolution and Behavior (EEB)
  BIOL 3761, 3811, and 4839 carry a lab component.
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
• BIOL 3401 - Evolution [SUSTAIN] (3.0 cr)
• BIOL 3402 - Evolution in the news (1.0 cr)
• BIOL 3760 - Marine Biology (3.0 cr)
• BIOL 3761 - Field Studies in Marine Biology (4.0 cr)
• BIOL 3811 - Plant Ecology (4.0 cr)
• BIOL 3830 - Aquatic Food Webs (3.0 cr)
• BIOL 3835 - Freshwater Ecology (3.0 cr)
• BIOL 4201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
• BIOL 4233 - Genomics (3.0 cr)
• BIOL 4818 - Biotic Response to Climate Change (3.0 cr)
• BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
• BIOL 4850 - Food and Humans (3.0 cr)
• BIOL 4891 - Animal Behavior (2.0 cr)
• BIOL 4992 - Senior Seminar: Classic Readings in Natural History (1.0 cr)
• BIOL 5201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
• BIOL 5240 - Ecological Genetics (3.0 cr)
• BIOL 5777 - Plankton Biology (2.0 cr)
• BIOL 5801 - Microbial Ecology (2.0 cr)
• BIOL 5805 - Fisheries Ecology and Management (3.0 cr)
• BIOL 5808 - Landscape Ecology: Theory and Application (3.0 cr)
• BIOL 5809 - Ecological Statistics (3.0 cr)
• BIOL 5818 - Biotic Response to Climate Change (3.0 cr)
• BIOL 5833 - Stream Ecology (3.0 cr)
• BIOL 5861 - Lake Ecology (3.0 cr)
• BIOL 5865 - Conservation Biology (2.0 cr)
• BIOL 5870 - Wetland Ecology (3.0 cr)

**Supplemental Biology Electives (SBE)**
These courses can be used as additional electives only if they have not been used in the core. 2 cr of SSP 3002 TA Practicum (in Biology) may be substituted for BIOL 3993 as an upper division elective with departmental approval. A maximum of 2 cr BIOL 3993, a maximum of 4 cr BIOL 3994 and a maximum of 1 cr BIOL 3996 may be applied to the degree. BIOL 2102, 2202 and 2802 carry a lab component. BIOL 3011 can count if there has been a previous completion of either WRIT 3150 or BIO 3011.

Take 0 or more course(s) from the following:
• BIOL 2102 - Cell Biology Laboratory (2.0 cr)
• BIOL 2202 - Genetics Laboratory (2.0 cr)
• BIOL 2801 - General Ecology (3.0 cr)
• BIOL 2802 - Ecology Laboratory (2.0 cr)
• BIOL 3001 - Outreach to the K-12 Science Classroom (3.0 cr)
• BIOL 3011 - Writing for the Duluth Journal of Undergraduate Biology (3.0 cr)
• BIOL 3993 - Laboratory Teaching Experience (1.0 - 2.0 cr)
• BIOL 3994 - Undergraduate Research (1.0 - 3.0 cr)
• BIOL 3996 - Internship in Biology (1.0 - 2.0 cr)
• BIOL 5001 - Teaching and Learning in the Life Sciences (1.0 cr)
Duluth Campus
Biology B.S.
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 80 to 89
- Degree: Bachelor of Science

The BS in biology offers preparation for graduate school and a sound basis for professional training in biological and health sciences. Biology is a broad field, and students can tailor their programs to fit personal interests or career aspirations.

The two subplans: genetics, cell and development, & ecology, evolution and behavior, are the two major emphases in the study and practice of biology and choice of upper division electives gives students the flexibility to further focus their degree programs.

The Department of Biology encourages students to develop as active scholars and to participate in undergraduate research. The degree involves faculty from multiple departments in the Swenson College of Science and Engineering and the UM Medical School.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A minor or second major from another area of study outside the Department of Biology with the exception of the natural history minor.

This schedule presupposes placement into BIOL 1013, CHEM 1153, 1154 which require the prerequisites of high school chemistry and a math ACT of 24 or college algebra; and calculus I which requires the prerequisite of a math ACT of 27 or precalculus.

Biology BS Core Requirements (15 cr)
- BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
BIOL 2201 - Genetics (3.0 cr)
BIOL 3987 - Communication in Biology (2.0 cr)

Courses From Other Programs (30 cr)

Advanced Writing
- BIOL 3011 can count toward Biology SBE electives if there has been a previous completion of either WRIT 3150 or BIOL 3011.
- WRIT 3150 - Advanced Writing: Science (3.0 cr)
- or BIOL 3011 - Writing for the Duluth Journal of Undergraduate Biology (3.0 cr)

Calculus I
- MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Chemistry I and II with labs
- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
- CHEM 1155 - General Chemistry II (4.0 cr)
- CHEM 1156 - General Chemistry Lab II (1.0 cr)

Organic Chemistry with lab
- CHEM 2541 - Organic Chemistry I (3.0 cr)
- CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)

Physics I

Physics I course
- PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
- or PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
- or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

Physics I lab
- Students who take PHYS 2013 or 2017 MUST take PHYS 2014 to complete the Physics I requirement.
- Students who take PHYS 1001 DO NOT have to take PHYS 2014.
- PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Statistics
- Take 3 or more credit(s) from the following:
  - •STAT 2xxx
  - •STAT 3xxx
  - •STAT 4xxx
  - •STAT 5xxx

Program Sub-plans

Students are required to complete one of the following sub-plans.

Ecology, Evolution and Behavior
Students in the ecology, evolution, and behavior (EEB) sub-plan study the origin and maintenance of biodiversity and the interrelationship or organisms with each other and their physical environment. It prepares students for a wide range of careers including teaching, working on environmental problems for government agencies an industry, and for research positions at university and other institutions. It also provides excellent preparation for graduate school or professional programs including medicine and veterinary medicine. Student in the EEB sub-plan will choose from electives in the ecology, evolution, and behavior and diversity and taxonomy categories. These courses include inquiry based activities that explore the ecology, evolution and behavior of the diversity of life from microbes to moose.

Ecology, Evolution, & Behavior Core Courses (11 cr)
- BIOL 2801 - General Ecology (3.0 cr)
- BIOL 3401 - Evolution [SUSTAIN] (3.0 cr)
- BIOL 2110 - Cell and Molecular Biology (3.0 cr)
  - or BIOL 3100 - Cell Biology (3.0 cr)
- BIOL 2102 - Cell Biology Laboratory (2.0 cr)
  - or BIOL 2202 - Genetics Laboratory (2.0 cr)
  - or BIOL 2802 - Ecology Laboratory (2.0 cr)

Chemistry Requirements (3 - 4 cr)
- CHEM 2212 - Environmental Chemistry [NAT SCI, SUSTAIN] (4.0 cr)
  - or GEOL 3710 - Introduction to Geochemistry (3.0 cr)
  - or CHEM 2222 - Quantitative Analysis (3.0 cr)
  - with CHEM 2223 - Quantitative Analysis Laboratory (1.0 cr)
  - or CHEM 2542 - Organic Chemistry II (3.0 cr)
  - with CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)
Quantitative Reasoning Requirement (3-5 cr)
BIOL 4201, 5203 and 5809 can only be used if not taken for upper division biology credit.
Take 1 or more course(s) from the following:
- BIOL 4201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
- BIOL 5201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
- BIOL 5809 - Ecological Statistics (3.0 cr)
- CS 1121 - Introduction to Programming in Visual BASIC.NET [LE CAT3, LOGIC & QR] (3.0 cr)
- CS 1141 - Introduction to Programming in C# (3.0 cr)
- CS 1411 - Introduction to Programming in Matlab (4.0 cr)
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
- MATH 5233 - Mathematical Foundations of Bioinformatics (3.0 cr)
- STAT 3612 - Introduction to Probability and Statistics II (3.0 cr)
- STAT 4060 - Introduction to Biostatistics (3.0 cr)
- STAT 5411 - Analysis of Variance (3.0 cr)

Physica ll

Physics II course
- PHYS 1002 - Introduction to Physics II (5.0 cr)
- PHYS 2015 - General Physics II (4.0 cr)
- PHYS 2018 - Honors General Physics II (4.0 cr)

Physics II lab
Students who take PHYS 2015 or 2018 MUST take PHYS 2016 to complete the Physics I requirement.
Students who take PHYS 1002 DO NOT have to take PHYS 2016.
- PHYS 2016 - General Physics Lab II (1.0 cr)

Upper Division Biology BS Electives (18 cr)
Must include at least 2 courses 4xxx or above and 3 laboratory courses.

Take 18 or more credit(s) from the following categories: a combination of credits are needed from both required electives - parts A and B. Supplemental biology electives may be used to complete the outstanding credits toward the total credits needed.

Required Electives - Part A
Courses must be from at least 2 different categories.

Take 4 or more course(s) from the following:

Diversity and Taxonomy (DT)
All courses in this list carry a lab component.

Take 1 or more course(s) from the following:
- BIOL 3502 - General Microbiology (4.0 cr)
- BIOL 3601 - Plant Diversity (3.0 cr)
- BIOL 3603 - Plant Taxonomy (3.0 cr)
- BIOL 3701 - Animal Diversity (4.0 cr)
- BIOL 4731 - Entomology (3.0 cr)
- BIOL 4761 - Ichthyology (3.0 cr)
- BIOL 4763 - Ornithology (3.0 cr)
- BIOL 4764 - Mammalogy (3.0 cr)
- BIOL 5515 - Microbial Diversity and Phylogeny (3.0 cr)

Ecology, Evolution and Behavior (EEB)
BIOL 3781, 3811, 4839, and 5833 carry a lab component.

Take 1 or more course(s) from the following:
- BIOL 3402 - Evolution in the news (1.0 cr)
- BIOL 3760 - Marine Biology (3.0 cr)
- BIOL 3761 - Field Studies in Marine Biology (4.0 cr)
- BIOL 3811 - Plant Ecology (4.0 cr)
- BIOL 3830 - Aquatic Food Webs (3.0 cr)
- BIOL 3835 - Freshwater Ecology (3.0 cr)
- BIOL 4201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
- BIOL 4233 - Genomics (3.0 cr)
- BIOL 4818 - Biotic Response to Climate Change (3.0 cr)
- BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
- BIOL 4850 - Food and Humans (3.0 cr)
- BIOL 5809 - Animal Behavior (2.0 cr)
- BIOL 4992 - Senior Seminar: Classic Readings in Natural History (1.0 cr)
- BIOL 5201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
- BIOL 5240 - Ecological Genetics (3.0 cr)
• BIOL 5777 - Plankton Biology (2.0 cr)
• BIOL 5801 - Microbial Ecology (2.0 cr)
• BIOL 5805 - Fisheries Ecology and Management (3.0 cr)
• BIOL 5808 - Landscape Ecology: Theory and Application (3.0 cr)
• BIOL 5809 - Ecological Statistics (3.0 cr)
• BIOL 5818 - Biotic Response to Climate Change (3.0 cr)
• BIOL 5833 - Stream Ecology (3.0 cr)
• BIOL 5861 - Lake Ecology (3.0 cr)
• BIOL 5865 - Conservation Biology (2.0 cr)
• BIOL 5870 - Wetland Ecology (3.0 cr)

Required Electives - Part B
Take 1 or more course(s) from the following:

Anatomy, Morphology, Physiology (AMP)
All courses except BIOL 5772 carry a lab component.

Take 0 or more course(s) from the following:
• BIOL 3703 - Animal Physiology (3.0 cr)
• BIOL 3771 - Human Anatomy (4.0 cr)
• BIOL 3772 - Human Physiology (4.0 cr)
• BIOL 4199 - Frontiers in Cell Biology (3.0 cr)
• BIOL 4604 - Plant Physiology (4.0 cr)
• BIOL 5772 - Neural Systems and Behavior (3.0 cr)

Cell Biology (CELL)
BIOL 4361 and 5232 carry a lab component.

Take 0 or more course(s) from the following:
• BIOL 3100 - Cell Biology (3.0 cr)
• BIOL 3101 - Molecular Biology of Cancer (3.0 cr)
• BIOL 3102 - Cell Biology of Human Disease (3.0 cr)
• BIOL 3301 - Pattern the Embryo (3.0 cr)
• BIOL 3512 - Biology of HIV and AIDS (3.0 cr)
• BIOL 4199 - Frontiers in Cell Biology (3.0 cr)
• BIOL 4231 - Molecular Biology (3.0 cr)
• BIOL 4361 - Developmental Biology (3.0 cr)
• BIOL 4511 - Medical Microbiology (3.0 cr)
• BIOL 4631 - Plant Cell and Molecular Biology (3.0 cr)
• BIOL 5232 - Molecular Biology Laboratory (2.0 cr)
• BIOL 5511 - Virology (3.0 cr)
• BMS 5545 - Immunology (3.0 cr)

Supplemental Biology Electives (SBE) (Optional)
These courses can be used as additional electives only if they have not been used in the core. 2 cr of SSP 3002 TA Practicum (in Biology) may be substituted for BIOL 3993 as an upper division elective with departmental approval. A maximum of 2 cr of BIOL 3993, a maximum of 4 cr of BIOL 3994 and a maximum of 1 cr BIOL 3996 may be applied to the degree. BIOL 2102, 2202 and 2802 carry a lab component. BIOL 3011 can count if there has been a previous completion of either WRIT 3150 or BIO 3011.

Take 0 or more course(s) from the following:
• BIOL 2102 - Cell Biology Laboratory (2.0 cr)
• BIOL 2202 - Genetics Laboratory (2.0 cr)
• BIOL 2802 - Ecology Laboratory (2.0 cr)
• BIOL 3001 - Outreach to the K-12 Science Classroom (3.0 cr)
• BIOL 3011 - Writing for the Duluth Journal of Undergraduate Biology (3.0 cr)
• BIOL 3993 - Laboratory Teaching Experience (1.0 - 2.0 cr)
• BIOL 3994 - Undergraduate Research (1.0 - 3.0 cr)
• BIOL 3996 - Internship in Biology (1.0 - 2.0 cr)
• BIOL 5001 - Teaching and Learning in the Life Sciences (1.0 cr)

Genetics, Cell and Development
The genetics, cell and development (GCD) subplan prepares students for graduate school and careers in cell biology, genetics, developmental biology, physiology, immunology, biotechnology, molecular biology and microbiology. It is also designed to prepare students for application to professional schools including medicine, dentistry, pharmacy and veterinary medicine. Students in the GCD sub-plan will choose at least 3 CELL electives exploring the structure and function of cells. Students will also incorporate courses from other elective categories to tailor their degrees to meet their goals.

Core Courses (13 cr)
BIOL 3100 - Cell Biology (3.0 cr)
BIOL 4231 - Molecular Biology (3.0 cr)
BIOL 5232 - Molecular Biology Laboratory (2.0 cr)
BIOL 2102 - Cell Biology Laboratory (2.0 cr)
or BIOL 2202 - Genetics Laboratory (2.0 cr)
BIOL 2410 - Ecology and Evolution (3.0 cr)
or BIOL 3401 - Evolution [SUSTAIN] (3.0 cr)

**Upper Division Biology BS Electives (14 cr)**

Must include at least 1 course 4xxx or above and 1 laboratory course.

Take 14 or more credit(s) from the following categories. Additional required electives or optional electives may be used to complete the outstanding credits toward the total credits needed.

### Required Electives

Courses must be from at least 2 of the 3 categories.

#### Take 4 or more course(s) from the following:

**Cell Biology (CELL)**

BIOL 4361 and 5232 carry a lab component.

Take 0 or more course(s) from the following:
- BIOL 3512 - Biology of HIV and AIDS (3.0 cr)
- BIOL 3101 - Molecular Biology of Cancer (3.0 cr)
- BIOL 3102 - Cell Biology of Human Disease (3.0 cr)
- BIOL 3301 - Patterning the Embryo (3.0 cr)
- BIOL 4199 - Frontiers in Cell Biology (3.0 cr)
- BIOL 4361 - Developmental Biology (3.0 cr)
- BIOL 4511 - Medical Microbiology (3.0 cr)
- BIOL 4631 - Plant Cell and Molecular Biology (3.0 cr)
- BIOL 5232 - Molecular Biology Laboratory (2.0 cr)
- BIOL 5511 - Virology (3.0 cr)
- BMS 5545 - Immunology (3.0 cr)

**Anatomy, Morphology, Physiology (AMP)**

All courses except BIOL 5772 carry a lab component.

Take 0 or more course(s) from the following:
- BIOL 3703 - Animal Physiology (3.0 cr)
- BIOL 3771 - Human Anatomy (4.0 cr)
- BIOL 3772 - Human Physiology (4.0 cr)
- BIOL 4604 - Plant Physiology (4.0 cr)
- BIOL 5772 - Neural Systems and Behavior (3.0 cr)

**Diversity and Taxonomy (DT)**

All courses in this category carry a lab component.

Take 0 or more course(s) from the following:
- BIOL 3502 - General Microbiology (4.0 cr)
- BIOL 3601 - Plant Diversity (3.0 cr)
- BIOL 3603 - Plant Taxonomy (3.0 cr)
- BIOL 3701 - Animal Diversity (4.0 cr)
- BIOL 4731 - Entomology (3.0 cr)
- BIOL 4761 - Ichthyology (3.0 cr)
- BIOL 4763 - Ornithology (3.0 cr)
- BIOL 4764 - Mammalogy (3.0 cr)
- BIOL 5515 - Microbial Diversity and Phylogeny (3.0 cr)

### Optional Electives

Courses in the following two categories may be used to complete the outstanding credits towards the 14 total credits needed.

#### Take 0 or more course(s) from the following:

**Ecology, Evolution and Behavior (EEB)**

BIOL 3761, 3811, and 4839 carry a lab component.

Take 0 or more course(s) from the following:
- BIOL 3401 - Evolution [SUSTAIN] (3.0 cr)
- BIOL 3402 - Evolution in the news (1.0 cr)
- BIOL 3760 - Marine Biology (3.0 cr)
- BIOL 3761 - Field Studies in Marine Biology (4.0 cr)
- BIOL 3811 - Plant Ecology (4.0 cr)
- BIOL 3830 - Aquatic Food Webs (3.0 cr)
- BIOL 3835 - Freshwater Ecology (3.0 cr)
- BIOL 4201 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
• BIOL 4233 - Genomics (3.0 cr)
• BIOL 4818 - Biotic Response to Climate Change (3.0 cr)
• BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
• BIOL 4850 - Food and Humans (3.0 cr)
• BIOL 4891 - Animal Behavior (2.0 cr)
• BIOL 5201 - Senior Seminar: Classic Readings in Natural History (1.0 cr)
• BIOL 5240 - Leverage bioinformatic tools to manage big data and answer primary biology questions (3.0 cr)
• BIOL 5777 - Ecological Genetics (3.0 cr)
• BIOL 5801 - Microbial Ecology (2.0 cr)
• BIOL 5805 - Fisheries Ecology and Management (3.0 cr)
• BIOL 5808 - Landscape Ecology: Theory and Application (3.0 cr)
• BIOL 5809 - Ecological Statistics (3.0 cr)
• BIOL 5818 - Biotic Response to Climate Change (3.0 cr)
• BIOL 5833 - Stream Ecology (3.0 cr)
• BIOL 5861 - Lake Ecology (3.0 cr)
• BIOL 5865 - Conservation Biology (2.0 cr)
• BIOL 5870 - Wetland Ecology (3.0 cr)

Supplemental Biology Electives (SBE)
These courses can be used as additional electives only if they have not been used in the core. 2 cr of SSP 3002 TA Practicum (in Biology) may be substituted for BIOL 3993 as an upper division elective with departmental approval. A maximum of 2 cr BIOL 3993, a maximum of 4 cr BIOL 3994 and a maximum of 1 cr BIOL 3996 may be applied to the degree. BIOL 2102, 2202 and 2802 carry a lab component. BIOL 3011 can count if there has been a previous completion of either WRIT 3150 or BIO 3011.

Take 0 or more course(s) from the following:
• BIOL 2102 - Cell Biology Laboratory (2.0 cr)
• BIOL 2202 - Genetics Laboratory (2.0 cr)
• BIOL 2802 - Ecology Laboratory (2.0 cr)
• BIOL 3001 - Outreach to the K-12 Science Classroom (3.0 cr)
• BIOL 3011 - Writing for the Duluth Journal of Undergraduate Biology (3.0 cr)
• BIOL 3993 - Laboratory Teaching Experience (1.0 - 2.0 cr)
• BIOL 3994 - Undergraduate Research (1.0 - 3.0 cr)
• BIOL 3996 - Internship in Biology (1.0 - 2.0 cr)
• BIOL 5001 - Teaching and Learning in the Life Sciences (1.0 cr)

Courses Required From Other Programs (13 - 17 cr)

Biochemistry
CHEM 3322 - Biochemistry (3.0 cr)
CHEM 3324 - Biochemistry Laboratory (1.0 cr)
or CHEM 4351 - Biochemistry I (3.0 cr)
CHEM 4352 - Biochemistry II (3.0 cr)
CHEM 4363 - Biochemistry Laboratory (2.0 cr)

Organic Chemistry II with lab
CHEM 2542 - Organic Chemistry II (3.0 cr)
CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)

Physics II
Physics I course
PHYS 1002 - Introduction to Physics II (5.0 cr)
or PHYS 2015 - General Physics II (4.0 cr)
or PHYS 2018 - Honors General Physics II (4.0 cr)

Physics II lab
Students who take PHYS 2015 or 2018 MUST take PHYS 2016 to complete the Physics I requirement. Students who take PHYS 1002 DO NOT have to take PHYS 2016.
PHYS 2016 - General Physics Lab II (1.0 cr)
Duluth Campus
Biology Minor
Swenson College of Science and Engineering

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 32

Biology has long been recognized as basic to such important areas as environment, agriculture, and medicine.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Biology Minor Courses (19 cr)

General Biology I
BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
or BIOL 1013 [Inactive] [NAT SCI] (5.0 cr)

General Biology II and Genetics
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
BIOL 2201 - Genetics (3.0 cr)

Cell Biology
BIOL 2110 - Cell and Molecular Biology (3.0 cr)
or BIOL 3100 - Cell Biology (3.0 cr)

Ecology
BIOL 2410 - Ecology and Evolution (3.0 cr)
or BIOL 2801 - General Ecology (3.0 cr)
or BIOL 3401 - Evolution [SUSTAIN] (3.0 cr)

Upper Division Requirements (3 cr)
Take 1 or more course(s) totaling 3 or more credit(s) from the following:
- BIOL 3xxx
- BIOL 4xxx
- BIOL 5xxx

Chemistry (10 cr)
Introduction to Organic and Biological Chem I and II
CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
CHEM 1114 - Introduction to General, Organic, and Biological Chemistry II (5.0 cr)
or Chemistry I and II with labs
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
CHEM 1155 - General Chemistry II (4.0 cr)
CHEM 1156 - General Chemistry Lab II (1.0 cr)
Duluth Campus

Biomedical Sciences B.S.
Duluth School of Medicine - Adm, Pharmacy, College of - Adm, Swenson College of Science & Engineering
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 90
- Degree: Bachelor of Science

Refer to the Swenson College of Science and Engineering Student Affairs Office and the University of Minnesota Medical School Duluth Student Affairs Office, or the University of Minnesota Duluth College of Pharmacy Student Services Office.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 90 credits before admission to the program.

Three years of an undergraduate major in SCSE, including the advanced writing requirement, the UMD Liberal Education Program, all pre-med or pre-pharm courses, and the first year of medical or pharmacy school.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
See the Swenson College of Science and Engineering Student Affairs Office, the University of Minnesota Medical School Duluth Student Affairs Office, or the University of Minnesota Duluth College of Pharmacy Student Services Office.

Advanced writing requirement will be met by meeting requirements for admission to the UMD School or Medicine or UM College of Pharmacy.

Individualized Program
Individualized Plan
Duluth Campus
Chemical Engineering B.S.Ch.E.
Chemical Engineering
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 125 to 129
- Required credits within the major: 104 to 108
- Degree: Bachelor of Science in Chemical Engineering

The Department of Chemical Engineering strives for nationally recognized excellence in engineering education and research by using modern, hands-on, and active learning experiences to prepare undergraduate students for professional success, and to hold paramount the safety, health, and welfare of the public and protect the environment in performance of their professional duties.

The Department of Chemical Engineering produces engineers with a strong foundation of technical, communication, teamwork, and problem-solving skills required for professional success, consistent with the following objectives:

1. Pursue careers where they apply their engineering and problem-solving skills.
2. Pursue advanced studies or other forms of continuing education.
3. Value their University of Minnesota Duluth (UMD) chemical engineering education and endorse the program and its students.

This four-year baccalaureate (B.S.Ch.E.) degree program emphasizes the development of the student's ability to analyze and design chemical processing systems. By the end of the program, the student must demonstrate the ability to solve engineering problems, have a sensitivity to the social and environmental impacts of the engineering profession, and the ability to maintain a high level of competency.

Chemical engineering graduates are qualified for employment in diverse industries, ranging from those that manufacture inorganic chemicals, petrochemicals, plastics, synthetic fibers, paper and pulp, and pharmaceuticals to those that process minerals, materials, and hazardous wastes.

Graduates are qualified for assignments that include plant operations, process development, process control, project engineering, or technical sales, and frequently pursue engineering management later in their careers. They are also well qualified to continue with professional or graduate education.

The chemical engineering curriculum is based on fundamental sciences including physics, chemistry, and mathematics; traditional chemical engineering sciences such as material and energy balance, transport phenomena, and thermodynamics; and chemical engineering design courses such as reaction engineering, separations, and unit operations, with a capstone design course during the senior year. Students have an opportunity to become involved in research, through either the Undergraduate Research Opportunities Program or the department honors program.

The Bachelor of Science in Chemical Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org

Honors Requirement: To graduate with department honors, students must have a minimum 3.50 GPA and be nominated by the chemical engineering faculty.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students may declare a chemical engineering major as freshmen or sophomores.

Students must complete the majority of the program's lower division requirements (freshman and sophomore years), including CHE 2111 or 2211, CHEM 2541, MATH 3280, and PHYS 2015 and 2016, before applying for admission to upper division (junior and senior years). Successful completion of CHE 2111 or 2211 (with a grade of C+ or better) is required for admission to upper division. Admission is competitive and applicants are admitted on a space-available basis, with priority determined by the cumulative GPA in engineering, physics, mathematics, and chemistry through CHEM 2541.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.
General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. A minor or second major is not required for B.S.Ch.E.

2. A 2.00 minimum GPA in all courses taken in the chemical engineering major, including required courses in related fields. GPA requirements apply to all courses in the major taken at University of Minnesota Duluth calculated separately and to all courses in the major when transfer credits are included.

Introduction to Chemical Engineering (3 cr)
Transfer students with 36 or more credits and completion of one year of general chemistry and one year of calculus must take an additional 2xxx or higher engineering elective of 3 credits or more instead of CHE 1011.

CHE 1011 - Introduction to Chemical Engineering. [LE CAT5] (3.0 cr)
or CHE 2001 - Introduction to Environmental Engineering (3.0 cr)

CHE Lower Division (9 - 10 cr)

CHE 2011 - Design of Engineering Experiments (3.0 cr)
CHE 2121 - Chemical Engineering Thermodynamics (3.0 cr)
CHE 2111 - Material and Energy Balances (3.0 cr)
or CHE 2211 - Materials and Energy Balances (4.0 cr)

CHE Upper Division (37 - 38 cr)

CHE 3311 (5 cr) may be substituted for CHE 3111 (3 cr) and CHE 3112 (3 cr).
CHE 3031 - Computational Methods in Chemical Engineering (3.0 cr)
CHE 3111 - Fluid Mechanics (3.0 cr)
CHE 3112 - Heat and Mass Transfer (3.0 cr)
CHE 3211 - Chemical Engineering Laboratory I [COMM & LAN] (3.0 cr)
CHE 3231 - Properties of Engineering Materials (3.0 cr)
CHE 4111 - Separations (3.0 cr)
CHE 4211 - Chemical Engineering Laboratory II (3.0 cr)
CHE 4301 - Chemical Reaction Engineering (3.0 cr)
CHE 4402 - Process Dynamics and Control (3.0 cr)
CHE 4501 - Chemical Engineering Design I [SUSTAIN] (4.0 cr)
CHE 4502 - Chemical Engineering Design II (4.0 cr)
CHE 3241 - Principles of Particle Technology (3.0 cr)
or CHE 4141 - Material and Minerals Processing (3.0 cr)

Courses From Other Programs (41 - 42 cr)

Computer Science
CS 1121 - Introduction to Programming in Visual BASIC.NET [LE CAT3, LOGIC & QR] (3.0 cr)
or CS 1411 - Introduction to Programming in Matlab (4.0 cr)
Chemistry

Chemistry I with lab
- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Chemistry II with lab
- CHEM 1155 - General Chemistry II (4.0 cr)
- CHEM 1156 - General Chemistry Lab II (1.0 cr)

Organic Chemistry I with lab
- CHEM 2541 - Organic Chemistry I (3.0 cr)
- CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)

Mathematics

MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)

Physics

Physics I course
- PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
  or PHYS 2017 - Honors General Physics I [NAT SCI] (4.0 cr)

Physics I lab
- PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Physics II course
- PHYS 2015 - General Physics II (4.0 cr)
  or PHYS 2018 - Honors General Physics II (4.0 cr)

Physics II lab
- PHYS 2016 - General Physics Lab II (1.0 cr)

Advanced Chemistry Electives (8 cr)
May not be satisfied with CHEM 4184, 4185, 4634 or 5350.
Take 8 or more credit(s) from the following:
- CHEM 2xxx
- CHEM 3xxx
- CHEM 4xxx
- CHEM 5xxx

Chemical Engineering Electives (3 cr)
Take 3 or more credit(s) from the following:
- CHE 4xxx
- CHE 5xxx

Advanced Writing Requirement (3 cr)
WRIT 31xx or higher advanced writing course

Advanced Mathematics or Statistics Electives (3 - 4 cr)
Take 1 or more course(s) from the following:
- MATH 3298 - Calculus III (4.0 cr)
- MATH 3355 - Discrete Mathematics (4.0 cr)
- MATH 3810 - Applied Mathematics: Numerical Methods (4.0 cr)
- MATH 4240 - Applied Mathematics: Operational Methods (3.0 cr)
- MATH 5260 - Dynamical Systems (3.0 cr)
- MATH 5270 - Modeling with Dynamical Systems (3.0 cr)
- MATH 5280 - Partial Differential Equations (3.0 cr)
- MATH 5810 - Linear Programming (3.0 cr)
- MATH 5830 - Numerical Analysis: Approximation and Quadrature (4.0 cr)
- MATH 5840 - Numerical Analysis: Systems and Optimization (4.0 cr)
- MATH 5850 - Numerical Differential Equations (4.0 cr)
- STAT 3411 - Engineering Statistics (3.0 cr)
- STAT 3611 - Introduction to Probability and Statistics (4.0 cr)
Duluth Campus
Chemistry B.A.
Chemistry and Biochemistry, Swenson College of Science & Engineering
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 57 to 65
- Degree: Bachelor of Arts

Chemistry is the study of matter and the physical changes that matter undergoes. Chemical reactions occur every day and in every aspect of life: respiration, metabolism and growth in living systems, combustion in cars and heating plants, pharmaceutical and polymer production, and the conversion of raw materials to usable products.

Chemistry is an important and central subject. Students who are interested in health sciences such as medicine, pharmacy, dentistry, and related fields need to take several semesters of chemistry. Students who like scientific and technical subjects, and who have a solid math and science background from high school, are best prepared to major in chemistry.

Students completing the BA in chemistry generally plan to use chemistry as a study field that complements other areas such as law, library science, technical writing, public relations, or sales. BA students are encouraged to participate in undergraduate research. The major also provides a strong foundation for students planning to go to professional schools, such as medical or pharmacy school.

Honors requirement: Qualified majors may apply after the first semester of their sophomore year. Participants choose a research advisor and complete two semesters of effort on a jointly developed project. Written reports and an oral presentation of the research are also required.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current students who change from a BS degree or change colleges may request to be waived from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
1. A minor or second major in a different subject is required.
   The BMB major may be declared with the BA chemistry major. However, this combination does not satisfy the requirement for a minor or a second major in a different subject.
   The BA biochemistry major may be declared.

First Year (20 cr)
High school algebra and high school chemistry are required for CHEM 1173, 1174. This schedule presupposes placement in MATH 1296 as the first course.

**Chemistry I with lab**
- CHEM 1173 - General Chemistry I for Majors [NAT SCI] (4.0 cr)
- CHEM 1174 - General Chemistry I Lab for Majors [NAT SCI] (1.0 cr)

**Chemistry II with lab**
- CHEM 1175 - General Chemistry II for Majors (4.0 cr)
- CHEM 1176 - General Chemistry II Lab for Majors (1.0 cr)

**Math**
- Calculus I
  - MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- Calculus II
  - MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Second Year (22 cr)

**Organic Chemistry I with lab**
- CHEM 2541 - Organic Chemistry I (3.0 cr)
- CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)

**Organic Chemistry II with lab**
- CHEM 2542 - Organic Chemistry II (3.0 cr)
- CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)

Chem 2242 Analytical Chemistry and the Environment in Poland may be substituted for the following:
- CHEM 2222 - Quantitative Analysis (3.0 cr)
- CHEM 2223 - Quantitative Analysis Laboratory (1.0 cr)

**Physics I Course**
Take one of the following course pairs (PHYS 2013 or 2017 and 2014, and 2015 or 2018 and 2016 are strongly encouraged):
- PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
- or PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
- or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

**Physics I Lab**
- PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

**Physics II Course**
- PHYS 1002 - Introduction to Physics II (5.0 cr)
- or PHYS 2015 - General Physics II (4.0 cr)
- or PHYS 2018 - Honors General Physics II (4.0 cr)

**Physics II Lab**
- PHYS 2016 - General Physics Lab II (1.0 cr)

Third Year (8 - 16 cr)

**Biochemistry**
Choose one of the Biochemistry course sets.

**Biochemistry with lab**
- CHEM 3322 - Biochemistry (3.0 cr)
- CHEM 3324 - Biochemistry Laboratory (1.0 cr)
- or Biochemistry I and II with lab
  - CHEM 4351 - Biochemistry I (3.0 cr)
  - CHEM 4352 - Biochemistry II (3.0 cr)
  - CHEM 4363 - Biochemistry Laboratory (2.0 cr)

**Physical Chemistry**
Choose one of the Physical Chemistry course sets.

**Physical Chemistry with lab**
- CHEM 4633 - Physical Chemistry Laboratory (1.0 cr)
- CHEM 4634 - Physical Chemistry (3.0 cr)
- or Physical Chemistry I and II with labs
CHEM 4641 - Physical Chemistry I (3.0 cr)
CHEM 4643 - Physical Chemistry Laboratory I (1.0 cr)
CHEM 4642 - Physical Chemistry II (3.0 cr)
CHEM 4644 - Physical Chemistry Laboratory II (1.0 cr)

Fourth Year (3 cr)
Inorganic Chemistry
CHEM 3432 - Descriptive Inorganic Chemistry (3.0 cr)

Advanced Writing Requirement (3 cr)
WRIT 31xx
Chemistry B.S.

Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 76 to 80
- Degree: Bachelor of Science

Chemistry is a body of knowledge that helps explain the physical world and its processes. Chemists study substances— their composition, structures, properties, and reactions. The Department of Chemistry and Biochemistry provides classroom and laboratory learning opportunities and research experiences across the discipline designed to meet the needs of students in engineering, liberal arts, and pre-professional programs, as well as those who wish to pursue careers or graduate studies in chemistry or related disciplines.

Honors requirement: The Department of Chemistry and Biochemistry honors program helps outstanding chemistry majors develop into competent, independent research workers, encourages student interest in the discipline, and aids in the transition from student to working scientist. Qualified majors may apply after the first semester of their sophomore year. Participants choose a research adviser and complete two semesters on a jointly developed project. Written reports and an oral presentation of the research are also required.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A minor or second major in a different subject is required.
   The BS BMB and BS in chemistry may be declared. This combination satisfies the requirement of a minor or second major in a different subject.
   The BA in biochemistry major may be declared.

2. Students earning a BS degree meet the requirements for degree certification by the American Chemical Society.
Year One (20 cr)
High school algebra and high school chemistry are required for CHEM 1173, CHEM 1174. This schedule presupposes placement into MATH 1296.
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
CHEM 1173 - General Chemistry I for Majors [NAT SCI] (4.0 cr)
CHEM 1174 - General Chemistry I Lab for Majors [NAT SCI] (1.0 cr)
CHEM 1175 - General Chemistry II for Majors (4.0 cr)
CHEM 1176 - General Chemistry II Lab for Majors (1.0 cr)

Year Two (27 cr)
CHEM 2541 - Organic Chemistry I (3.0 cr)
CHEM 2542 - Organic Chemistry II (3.0 cr)
CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)
CHEM 2545 - Organic Chemistry II Laboratory for B.S. Chemistry Majors (2.0 cr)
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
Take the following course pair or CHEM 2242 maybe substituted.
CHEM 2222 - Quantitative Analysis (3.0 cr)
CHEM 2223 - Quantitative Analysis Laboratory (1.0 cr)
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)
PHYS 2015 - General Physics II (4.0 cr)
PHYS 2018 - Honors General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)

Year Three (16 - 20 cr)
CHEM 3432 - Descriptive Inorganic Chemistry (3.0 cr)
CHEM 4184 - Undergraduate Seminar I (1.0 cr)
CHEM 4641 - Physical Chemistry I (3.0 cr)
CHEM 4642 - Physical Chemistry II (3.0 cr)
CHEM 4643 - Physical Chemistry Laboratory I (1.0 cr)
CHEM 4644 - Physical Chemistry Laboratory II (1.0 cr)
Biochemistry
Choose one of the following biochemistry course sets.
CHEM 3322 - Biochemistry (3.0 cr)
CHEM 3324 - Biochemistry Laboratory (1.0 cr)
CHEM 4351 - Biochemistry I (3.0 cr)
CHEM 4352 - Biochemistry II (3.0 cr)
CHEM 4363 - Biochemistry Laboratory (2.0 cr)

Year Four (10 cr)
CHEM 4185 - Undergraduate Seminar II (1.0 cr)
CHEM 4242 - Instrumental Analysis (3.0 cr)
CHEM 4243 - Instrumental Chemistry Laboratory (2.0 cr)
CHEM 4435 - Inorganic Chemistry Laboratory (1.0 cr)
CHEM 4436 - Inorganic Chemistry (3.0 cr)

Advanced Writing Requirement (3 cr)
Advanced Writing 31xx
Duluth Campus
Chemistry Minor
Chemistry and Biochemistry
Swenson College of Science and Engineering

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 29 to 30

Chemistry helps explain the physical world and its processes.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Chemistry Minor Courses (29-30 cr)
Chemistry I and II with labs
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
CHEM 1155 - General Chemistry II (4.0 cr)
CHEM 1156 - General Chemistry Lab II (1.0 cr)
Organic Chemistry I and II with labs
CHEM 2541 - Organic Chemistry I (3.0 cr)
CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)
CHEM 2542 - Organic Chemistry II (3.0 cr)
CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)
Additional Chemistry
CHEM 2222 - Quantitative Analysis (3.0 cr)
CHEM 2223 - Quantitative Analysis Laboratory (1.0 cr)
or CHEM 2212 - Environmental Chemistry [NAT SCI, SUSTAIN] (4.0 cr)
or CHEM 2242 - Analytical Chemistry and the Environment in Poland (4.0 cr)
Chemistry Electives
Take 1 or more course(s) from the following:
• CHEM 3322 - Biochemistry (3.0 cr)
• CHEM 4351 - Biochemistry I (3.0 cr)
• CHEM 4634 - Physical Chemistry (3.0 cr)
• CHEM 4641 - Physical Chemistry I (3.0 cr)
Mathematics
Take 1 or more course(s) from the following:
• MATH 1250 - Precalculus Analysis [LE CAT2, LOGIC & QR] (4.0 cr)
• MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
• MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
Duluth Campus
Civil Engineering B.S.C.E.
UMD-Civil Engineering, Dept of
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 131 to 132
- Required credits within the major: 119 to 120
- This program requires summer terms.
- Degree: Bachelor of Science in Civil Engineering

The B.S.C.E. program in civil engineering integrates topics from chemistry, physics, advanced mathematics, statistics, geology, and core engineering science to prepare graduates to work professionally in public and private organizations that design, develop, and construct structures; design, build, and maintain transportation systems and infrastructure; and design, operate, and control water resource systems. Graduates are rooted in safe and efficient design skills and show respect for and strive to improve the environment wherever they work.

The program includes four areas in civil engineering: transportation engineering, environmental and water resource engineering, structural engineering, and geotechnical engineering. Upper division students are exposed to each of these areas and obtain an in-depth knowledge in at least one area by taking additional elective courses.

Civil engineering graduates are qualified for employment in a wide variety of organizations, both public and private, including design, material testing and manufacture, construction, transportation, natural resources development, and energy. Graduates are prepared to begin their first step toward professional registration by taking the FE exam before completing their collegiate degree. They are also well qualified to continue with graduate education in civil engineering or engineering management.

Students in the B.S.C.E. program have the opportunity to put their design and entrepreneurial skills to use in ASCE design competitions, projects sponsored by regional companies, and research projects in the Undergraduate Research Opportunities Program.

The Bachelor of Science in Civil Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org

Honors Requirement: To graduate with department honors, a student must have a 3.40 GPA, be an active member of Tau Beta Pi or a professional engineering society (e.g. ASCE, ACI, SWE, & SME), and be nominated by a department faculty member.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 11 courses before admission to the program.

Freshman and transfer students students are usually admitted to pre-major status before admission to this major

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Freshmen, sophomores, and transfer students may declare a CE major and be admitted to lower division status. Admission to the upper division B.S.C.E. program is competitive and based on performance in lower division courses and space availability. To be considered, students must complete the CE Application to upper division. The following requirements must be met:
1. Completion of the following 11 classes with a C- or better in each class (total 36 credits).
2. A cumulative GPA of 2.5 or better in the 11 required classes.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Course Admission Requirements (36 -37 cr)
Chemistry I with lab
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Civil Engineering
CE 1025 - Introduction to Civil Engineering (1.0 cr)

Computer Science
CS 1411 - Introduction to Programming in Matlab (4.0 cr)
CS 1121 - Introduction to Programming in Visual BASIC.NET [LE CAT3, LOGIC & QR] (3.0 cr)

Mathematics
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)

Physics I course
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

Physics I lab
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Writing
WRIT 1120 - College Writing [LE CAT1, WRITING] (3.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements

1. A minor or second major is not required for B.S.C.E.

2. Summer terms are not required but are optional for all students.

3. C- or better is required in all Civil Engineering courses.

B.S.C.E. Major Requirements (44 cr)
CE 2020 - Computational Tools for Civil Engineers (4.0 cr)
CE 3015 - CAD & Engineering Drawing (3.0 cr)
CE 3016 - Surveying (2.0 cr)
CE 3025 - Environmental Engineering [SUSTAIN] (4.0 cr)
CE 3026 - Project Management (3.0 cr)
CE 3027 - Infrastructure Materials (4.0 cr)
CE 3115 - Structural Analysis (3.0 cr)
CE 3221 - Fluid Mechanics (3.0 cr)
CE 3225 - Hydraulics and Hydrology (3.0 cr)
CE 3316 - Transportation Engineering (4.0 cr)
CE 3426 - Soil Mechanics (4.0 cr)
CE 4126 - Design of Concrete Structures (3.0 cr)
CE 4255 - Senior Design (4.0 cr)
Additional B.S.C.E. Requirements (21 cr)

Communications
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)

Economics
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
or ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Mathematics and Statistics
MATH 3298 - Calculus III (4.0 cr)
STAT 3411 - Engineering Statistics (3.0 cr)

Physics II with lab
PHYS 2015 - General Physics II (4.0 cr)
or PHYS 2018 - Honors General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)

Advanced Writing
WRIT 31xx - Adv Writ (3 cr)

Technical Electives (6 cr)
An additional 6 credits of technical electives must be taken and can be chosen from any course in the Swenson College of Science and Engineering at 2xxx or above (including CE courses not already counted toward the degree). CHEM 1152, CHEM 1155 and CHEM 1175, CHEM 1176, as well as GIS 3564, GIS 4565, or SAFE 6051 can also be used to fulfill technical elective requirement. STAT 2411 may not be used to fulfill this requirement.

Civil Engineering Electives (12 cr)
Choose 12 credits from the courses listed below. At least two courses (6 credits) must be taken from the same area. CE 4991 (Independent Study), CE 4995 (Special Topics), and CE 4996 (Independent Study) are allowed with Department approved petition.

Structures Area
Take 0 or more course(s) from the following:
• CE 4100 - Applications of Management in Resilient Precast Concrete (1.0 cr)
• CE 4115 - Design of Steel Structures (3.0 cr)
• CE 4128 - Prestressed Concrete Structures (3.0 cr)
• CE 4135 - Advanced Reinforced Concrete and Steel Design (3.0 cr)
• CE 4136 - Structural Systems (3.0 cr)
• CE 4515 - Sustainable Design [SUSTAIN] (3.0 cr)
• CE 5027 - Advanced Concrete Materials and Repair (3.0 cr)
• CE 5115 - Structural Dynamics (3.0 cr)
• CE 5127 - Bridge Analysis and Design (3.0 cr)
• CE 5128 - Prestressed Concrete Structures (3.0 cr)
• CE 5135 - Advanced Reinforced Concrete and Steel Design (3.0 cr)
• CE 5515 - Sustainable Design and Construction (SUSTAIN) (3.0 cr)

-OR-

Environmental and Water Resources Area
Take 0 or more course(s) from the following:
• CE 4213 - Open Channel Hydraulics (3.0 cr)
• CE 4215 - Hydraulic Design (3.0 cr)
• CE 4228 - Watershed Engineering (3.0 cr)
• CE 4237 - Water Quality Engineering (3.0 cr)
• CE 4246 - Environmental Remediation Technologies (3.0 cr)
• CE 4256 - Design of Water and Waste Water Treatment Plants (3.0 cr)
• CE 4257 - Municipal Solid Waste Management and Hazardous Waste Systems (3.0 cr)
• CE 5201 - Water Policy (3.0 cr)
• CE 5203 - Stream Crossing and Culvert Design (3.0 cr)
• CE 5216 - Applications in Environmental Modeling (3.0 cr)
• CE 5226 - Water Resources Engineering (3.0 cr)
• CE 5237 - Water Quality Engineering (3.0 cr)
• CE 5241 - Water Chemistry (3.0 cr)
• CE 5246 - Environmental Remediation Technologies (3.0 cr)
• CE 5251 - Design of Chemical Physical Unit Operations in Water Treatment (4.0 cr)
• CE 5525 - Decision, Risk and Reliability (3.0 cr)

-OR-

Transportation Engineering Area
Take 0 or more course(s) from the following:

• CE 4315 - Design of Traffic Systems (3.0 cr)
• CE 4316 - Pavement Analysis and Design (3.0 cr)
• CE 4318 - Pavement Maintenance, Rehabilitation, and Management (3.0 cr)
• CE 4326 - Highway Planning and Design (3.0 cr)
• CE 5315 - Design of Traffic Systems (3.0 cr)
• CE 5316 - Pavement Analysis and Design (3.0 cr)
• CE 5317 - Traffic Flow Theory and Modeling (3.0 cr)
• CE 5318 - Pavement Maintenance, Rehabilitation, and Management (3.0 cr)
• CE 5326 - Highway Planning and Design (3.0 cr)

-OR-

Geotechnical Engineering Area

Take 0 or more course(s) from the following:

• CE 4415 - Geotechnical Design (3.0 cr)
• CE 4422 - Numerical Modeling in Geotechnical Engineering (3.0 cr)
• CE 4426 - Rock Mechanics (3.0 cr)
• CE 5420 - Advanced Soil Mechanics (3.0 cr)
• CE 5421 - Applied Geostatistics (3.0 cr)
• CE 5422 - Numerical Modeling in Geotechnical Engineering (3.0 cr)
• CE 5426 - Rock Mechanics (3.0 cr)
Duluth Campus

Computer Engineering Minor

Electrical Engineering
Swenson College of Science and Engineering

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 36

The Computer Engineering minor provides students with basic knowledge and skills needed to understand, analyze, and design computer hardware and software systems. It provides high quality education in topics related to computer engineering that will prepare students for employment opportunities in the private and public sectors, graduate studies, and research.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Lower Division (32 cr)
- Calculus I and II
  MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
  MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
- Computer Science
  Computer Science I
    CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
    or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
  Computer Science II
    CS 1521 - Computer Science II (5.0 cr)
  Additional lower division courses
    CS 2511 - Software Analysis and Design (4.0 cr)
    EE 1315 - Digital Logic (4.0 cr)
    CS 2521 - Computer Organization and Architecture (4.0 cr)
    or EE 2325 - Microprocessor Systems (4.0 cr)

Upper Division (4 cr)
- CS 5621 - Computer Architecture (4.0 cr)
  or EE 4305 - Computer Architecture (4.0 cr)
Duluth Campus

Computer Science B.A.

Computer Science

Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 57 to 58
- Degree: Bachelor of Arts

Computers are ubiquitous in today’s society and have application in nearly every aspect of our working and personal lives. The field of computer science has evolved to the point where advanced computer science techniques are now an integral component in nearly every discipline. Computing professionals who have sufficient exposure to a second discipline in their undergraduate studies are desperately needed in order to interact in a knowledgeable manner with experts in other areas in order to solve a broad range of problems. The computer science BA degree program prepares students to become such computing professionals and also allows for the pursuit of graduate and professional degrees in a wide range of disciplines.

The computer science BA is an interdisciplinary program that will produce computing professionals who have the necessary depth of expertise in computer science to have lifelong professional careers in the field. The program requires each student to gain knowledge and experience in the fundamentals of computer science, including computer organization and architecture, data structures and related algorithms, and programming languages. In addition, it allows for significant course work in a second complementary discipline. Students who complete this degree will have enormous flexibility and opportunity in their future careers and education since there is no discipline that is not touched in significant ways by computer science.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites

Introductory Course (1 cr)
Transfer students with 24 or more credits and current students who change from a BS degree or change colleges may request to be waived from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.

UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
1. A minor or a second major from another department; the computer engineering minor may not be used to satisfy this requirement.

2. This schedule presupposes placement into MATH 1296.

3. A grade of C- or better is required in all prerequisite courses for computer science classes.

4. Senior survey; contact the computer science office for details.

Computer Science Required Courses (30 cr)
CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
CS 1521 - Computer Science II (5.0 cr)
CS 2511 - Software Analysis and Design (4.0 cr)
CS 2521 - Computer Organization and Architecture (4.0 cr)
CS 3531 - Automata and Formal Languages (4.0 cr)
CS 4531 - Software Engineering (4.0 cr)
CS 2531 - Discrete Structures for Computer Science (4.0 cr)
or MATH 3355 - Discrete Mathematics (4.0 cr)

Computer Science Electives (12 cr)
Take 12 or more credit(s) from the following:
• CS 4xxx
• CS 5xxx

Courses Required From Other Programs (14 - 15 cr)
COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
STAT 3411 - Engineering Statistics (3.0 cr)
or STAT 3611 - Introduction to Probability and Statistics (4.0 cr)
WRIT 31xx  Adv Writing (3 cr)
Duluth Campus
Computer Science B.S.
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 81 to 85
- Degree: Bachelor of Science

Computer science is a discipline that requires understanding the design of computers and computational processes. The BS in computer science is an accredited, four-year program that provides a solid foundation in mathematics and statistics, computational problem solving, software design and analysis, programming languages, algorithms, data structures, and computer organization and architecture. The program also requires that students acquire significant knowledge in several sub-disciplines of computer science, thus enabling them to apply and situate their knowledge of computer science fundamentals. Goals of the learning process include highly developed programming skills, an understanding of the context in which computing activities occur, and an ability to communicate effectively. The program provides the necessary foundational studies for students preparing for graduate school, as well as those seeking careers in industry.

The program is accredited by the Computing Accreditation Commission of ABET, http://www.abet.org.

Honors requirement: Program candidates submit an application to the department honors committee. Participants must maintain a 3.00 cumulative GPA and a 3.30 GPA in the major and complete an honors research project supervised by a faculty member; credit for the project can be earned in CS 4994 - Honors Project.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A minor or a second major from another department; the computer engineering minor may not be used to satisfy this requirement.
2. A grade of C- or better is required in all prerequisites courses for computer science classes.

3. Senior survey; contact the computer science office for details.

Core Courses (22 cr)

- CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
  or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
- CS 1521 - Computer Science II (5.0 cr)
- CS 2511 - Software Analysis and Design (4.0 cr)
- CS 2521 - Computer Organization and Architecture (4.0 cr)

Subgroup 2
- CS 2531 - Discrete Structures for Computer Science (4.0 cr)
  or MATH 3355 - Discrete Mathematics (4.0 cr)

Advanced Courses (20 cr)

- CS 3111 - Computer Ethics [HUMANITIES] (4.0 cr)
- CS 3531 - Automata and Formal Languages (4.0 cr)
- CS 4531 - Software Analysis and Design (4.0 cr)
- CS 5631 - Operating Systems (4.0 cr)
- CS 5621 - Computer Organization and Architecture (4.0 cr)
  or CS 5651 - Computer Networks (4.0 cr)

Advanced Course Electives (12 cr)

Either CS 5621 or CS 5651 must be taken (under advanced courses); if both courses are taken, the second course fulfills the requirement of one advanced course elective.

Take 3 or more course(s) from the following:
- CS 4611 - Database Management Systems (4.0 cr)
- CS 4821 - Computer Security (4.0 cr)
- CS 4995 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
- CS 5511 - Theory of Computation (4.0 cr)
- CS 5521 - Advanced Data Structures (4.0 cr)
- CS 5541 - Artificial Intelligence (4.0 cr)
- CS 5551 - User Interface Design (4.0 cr)
- CS 5571 - Principles of Programming Language (4.0 cr)
- CS 5641 - Compiler Design (4.0 cr)
- CS 5721 - Computer Graphics (4.0 cr)
- CS 5751 - Introduction to Machine Learning and Data Mining (4.0 cr)
- CS 5761 - Introduction to Natural Language Processing (4.0 cr)

Courses From Other Programs (17 - 18 cr)

Advanced Writing
- WRIT 3130 - Advanced Writing: Engineering (3.0 cr)
  or WRIT 3150 - Advanced Writing: Science (3.0 cr)

Communications
- COMM 1112 - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)

Math and Stats
- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- MATH 3326 - Vectors and Matrices (3.0 cr)
  or MATH 4326 - Linear Algebra (3.0 cr)
- STAT 3411 - Engineering Statistics (3.0 cr)
  or STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Lab Science Sequences (10-13 cr)

Complete one of the following lab science sequences:

Biology
- BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
- BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
  or Chemistry
- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
- CHEM 1155 - General Chemistry II (4.0 cr)
- CHEM 1156 - General Chemistry Lab II (1.0 cr)
  or Geology
- GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)

Take 2 or more course(s) from the following:
• GEOL 2110 - Earth History (4.0 cr)
• GEOL 2120 - The Earth's Dynamic Interior (3.0 cr)
• GEOL 2311 - Mineralogy (4.0 cr)
• GEOL 2312 - Petrology (5.0 cr)
• GEOL 3210 - Geomorphology (4.0 cr)
• GEOL 3420 - Sedimentology and Stratigraphy (4.0 cr)

or Physics

PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
    or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)
PHYS 2015 - General Physics II (4.0 cr)
    or PHYS 2018 - Honors General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)
Duluth Campus

Computer Science Minor

Computer Science

Swenson College of Science and Engineering

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 34

Computer science is a discipline that requires understanding the design of computers and computational processes.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Minor Courses (23 cr)

- CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
  or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
- CS 1521 - Computer Science II (5.0 cr)
- CS 2511 - Software Analysis and Design (4.0 cr)
- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- CS 2531 - Discrete Structures for Computer Science (4.0 cr)
  or MATH 3355 - Discrete Mathematics (4.0 cr)

Electives (11 cr)

CS courses must be at 35xx or above.
Take 11 or more credit(s) from the following:
- CS 35xx or above
- CS 4xxx
- CS 5xxx
- EE 4341 - Digital Systems (4.0 cr)
- EE 4305 - Computer Architecture (4.0 cr)
- CS 2521 - Computer Organization and Architecture (4.0 cr)
  or EE 2325 - Microprocessor Systems (4.0 cr)
Duluth Campus
Electrical Engineering B.S.E.E.
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 130
- Required credits within the major: 112
- Degree: Bachelor of Science in Electrical Engineering

The electrical engineering B.S.E.E. program is concerned with the theory, design, and application of electrical phenomena. The department displays strengths in such diverse areas as microelectronics and VLSI, signal processing, electromagnetics, digital computer systems, automatic control, communications, and power and energy. The program balances theoretical and practical experience in electrical engineering through analysis, synthesis, and experimentation, using facilities that include major instructional laboratories and research laboratories.

The Bachelor of Science in Electrical Engineering is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A minor or second major is not required for B.S.E.E.
2. EE majors must meet with their advisers each semester. See department for details.
3. Completion of the EE "Exit Survey," and a one-to-one exit interview with the EE department head.

EE Requirements (37 cr)
EE 1001 - Introduction to Electrical Engineering (2.0 cr)
EE 1315 - Digital Logic (4.0 cr)
EE 2006 - Electrical Circuit Analysis (4.0 cr)
EE 2111 - Linear Systems and Signal Analysis (4.0 cr)
EE 2212 - Electronics I (4.0 cr)
EE 2325 - Microprocessor Systems (4.0 cr)
EE 3151 - Control Systems (4.0 cr)
EE 3235 - Electronics II (4.0 cr)
EE 3445 - Electromagnetic Fields (3.0 cr)
EE 4899 - Senior Design Project I (1.0 cr)
EE 4999 - Senior Design Project II (3.0 cr)
or EE 4951 - Design Workshop (4.0 cr)

EE Electives (21 cr)
Minimum one course from four out of the five areas of specialization. The rest of the credits can be filled from any of the five areas.
With approval, students may also take EE 5995 Special Topics course; group assigned will depend upon topics title.
Take 21 or more credit(s) from the following:

Communications and Signal Processing
• EE 5477 - Antennas and Transmission Lines (3.0 cr)
or EE 5479 - Antennas and Transmission Lines Laboratory (1.0 cr)
or EE 5741 - Digital Signal Processing (3.0 cr)
or EE 5745 - Medical Imaging (3.0 cr)
or EE 5765 - Modern Communication (4.0 cr)

Controls and Robotics
• EE 5151 - Digital Control System Design (3.0 cr)
or EE 5351 - Introduction to Robotics and Mobile Robot Control Architectures (3.0 cr)
or EE 5742 - Pattern Recognition and Machine Learning (4.0 cr)
or EE 5801 - Introduction to Artificial Neural Networks (3.0 cr)
or EE 5831 - Fuzzy Set Theory and Its Application (3.0 cr)

Digital Systems
• EE 4305 - Computer Architecture (4.0 cr)
or EE 4321 - Computer Networks (3.0 cr)
or EE 4341 - Digital Systems (4.0 cr)
or EE 5315 - Multiprocessor-Based System Design (3.0 cr)

Microelectronics and VLSI
• EE 4311 - Design of Very Large-Scale Integrated Circuits (3.0 cr)
or EE 4611 - Introduction to Solid-State Semiconductors (3.0 cr)
or EE 5211 - Advanced Analog Integrated Circuit Design (3.0 cr)
or EE 5611 - Microelectronics Technology (3.0 cr)

Power and Energy
• EE 4501 - Power Systems (4.0 cr)
or EE 5501 - Energy Conversion System (3.0 cr)
or EE 5522 - Power Electronics I (3.0 cr)
or EE 5533 - Grid- Resiliency, Efficiency and Technology (3.0 cr)

Non-EE Electives (3 cr)
Take 3 or more credit(s) from the following:
• CE 2017 - Engineering Mechanics: Statics and Mechanics of Materials (5.0 cr)
• CHE 2117 - Introduction to Engineering Mechanics (3.0 cr)
• CHE 2111 - Material and Energy Balances (3.0 cr)
• ME 2105 - Operations Research (4.0 cr)
• ME 2105 - Introduction to Material Science for Engineers (3.0 cr)

Courses From Other Programs (51 cr)
First math course is determined by the ACT math score. This schedule presupposes placement into Math 1296.

Chemistry I with lab
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Computer Science
CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)

Economics
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
or ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Mathematics and Statistics
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
MATH 3298 - Calculus III (4.0 cr)
STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Ethics
CS 3111 - Computer Ethics [HUMANITIES] (4.0 cr)
or PHIL 3242 - Values and Technology [LE CAT8, HUMANITIES] (3.0 cr)
or PHIL 3325 - Environmental Ethics [HUMANITIES, SUSTAIN] (4.0 cr)

Physics I course
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

Physics I lab
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Physics II course
PHYS 2015 - General Physics II (4.0 cr)
or PHYS 2018 - Honors General Physics II (4.0 cr)

Physics II lab
PHYS 2016 - General Physics Lab II (1.0 cr)

Advanced Writing
WRIT 3130 - Advanced Writing: Engineering (3.0 cr)
Duluth Campus
Electrical Engineering Minor
Electrical Engineering
Swenson College of Science and Engineering

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 43 to 44

The Electrical Engineering minor provides students with basic knowledge and skills needed to understand electrical circuits, signal analysis, electronics and digital systems. It provides high quality education in electrical engineering related topics that will prepare students for employment opportunities in the private and public sectors.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Lower Division (40 cr)
Engineering
- EE 1315 - Digital Logic (4.0 cr)
- EE 2006 - Electrical Circuit Analysis (4.0 cr)
- EE 2111 - Linear Systems and Signal Analysis (4.0 cr)
- EE 2212 - Electronics I (4.0 cr)
Mathematics
- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
- MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
Physics
- PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
- PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)
- PHYS 2015 - General Physics II (4.0 cr)
- PHYS 2016 - General Physics Lab II (1.0 cr)
- PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
- PHYS 2018 - Honors General Physics II (4.0 cr)

Upper Division (3 - 4 cr)
Take 1 or more course(s) from the following:
- EE 3151 - Control Systems (4.0 cr)
- EE 3235 - Electronics II (4.0 cr)
- EE 3445 - Electromagnetic Fields (3.0 cr)
- EE 4501 - Power Systems (4.0 cr)
- EE 4611 - Introduction to Solid-State Semiconductors (3.0 cr)

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Information current as of October 02, 2018
Duluth Campus
Energy Engineering Minor
Electrical Engineering
Swenson College of Science and Engineering

• Program Type: Undergraduate free-standing minor
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 45 to 46
• none

The energy engineering minor provides students with basic knowledge and skills needed to understand, address, and make effective decisions about the generation, production, utilization, and application of energy. It provides high quality education in energy-related topics that will prepare students for employment opportunities in the private and public sectors, graduate studies, and research.

This interdisciplinary minor, administered by the Department of Electrical and Computer Engineering, is designed for students with majors in engineering. However, students with majors in other disciplines may also apply, should they meet the course prerequisites. The coursework provides broad-based science and engineering knowledge suited to energy generation, production, utilization, and application. The minor enhances degrees in engineering.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Pre-Minor Core (29 cr)
Chemistry with lab
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
Mathematics
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
Physics I with lab
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)
Physics II with lab
PHYS 2015 - General Physics II (4.0 cr)
or PHYS 2018 - Honors General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)

Core Courses (10 - 11 cr)
CHE 2121 - Chemical Engineering Thermodynamics (3.0 cr)
or ME 2211 - Thermodynamics [SUSTAIN] (3.0 cr)
CHE 2111 - Material and Energy Balances (3.0 cr)
or CHE 2211 - Materials and Energy Balances (4.0 cr)
EE 2006 - Electrical Circuit Analysis (4.0 cr)

Electives (6 cr)
Take 6 or more credit(s) from the following:
• CE 5515 - Sustainable Design and Construction (SUSTAIN) (3.0 cr)
• CHE 4603 - Biorenewable Resources [SUSTAIN] (3.0 cr)
• CHE 5612 - Hazardous Waste Process Engineering (3.0 cr)
• EE 4501 - Power Systems (4.0 cr)
• EE 5533 - Grid- Resiliency, Efficiency and Technology (3.0 cr)
• ME 4050 - Fundamentals of Nuclear Engineering (3.0 cr)
• ME 4375 - Pipeline Engineering (3.0 cr)
• EE 5501 - Energy Conversion System (3.0 cr)
or ME 5325 - Sustainable Energy System (3.0 cr)
Engineering Physics B S E P
UMD: Physics & Astronomy
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 129 to 130
- Required credits within the major: 111 to 112
- Degree: Bachelor of Science in Engineering Physics

Engineering physics is the study of the combined disciplines of physics, engineering and mathematics in order to develop an understanding of the interrelationships of these three disciplines. Fundamental physics is combined with problem solving and engineering skills, which then has broad applications. Career paths for Engineering physics is usually (broadly) "engineering, applied science or applied physics through research, teaching or entrepreneurial engineering". This interdisciplinary knowledge is designed for the continuous innovation occurring with technology.

Unlike traditional engineering disciplines, engineering physics is not confined to a particular branch of physics or engineering. Instead, engineering physics is meant to provide a more thorough grounding in applied physics for a selected specialty such as electrical engineering, mechanical engineering, or a combination of engineering disciplines. It is the discipline devoted to creating and optimizing engineering solutions through enhanced understanding and integrated application of mathematical, scientific, statistical, and engineering principles. The discipline is also meant for cross-functionality and bridges the gap between physics and practical engineering with emphasis in research and development, design, and analysis. The distinguishing feature of an engineering physics program is a focus on the fundamentals of physics and mathematics, both experimental and theoretical, that are at the heart of modern engineering and research and have broad applicability. In this program students combine this physics base with a firm background in engineering or applied science.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
Students must complete 47 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

Freshman, sophomores, and transfer students may declare an engineering physics major and be admitted to lower division status. Admission to the upper division B.S.E.P. program is competitive and based on performance in lower division courses and space availability. To be considered, students must complete the Engineering Physics Application to upper division.

The following requirements must be met:
1. Completion of the following classes in Course Admission Requirements (47 cr)
2. A cumulative GPA of 2.5 or higher

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Course Admissions Requirements (47 cr)
Chemistry I with lab
- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Mathematics
The first math course is determined by ACT math score. The sample plan presupposes placement into MATH 1296.
- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
- MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
- MATH 3298 - Calculus III (4.0 cr)

Physics

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Information current as of October 02, 2018
Physics I with lab  
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)  
 or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)  
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)  

Physics II with lab  
PHYS 2015 - General Physics II (4.0 cr)  
 or PHYS 2018 - Honors General Physics II (4.0 cr)  
PHYS 2016 - General Physics Lab II (1.0 cr)  

Engineering  
EE 2006 - Electrical Circuit Analysis (4.0 cr)  
ENGR 1210 - Introduction to Engineering (2.0 cr)  
ME 2226 - Dynamics (3.0 cr)  

General Requirements  
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:  
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.  
2. Students must complete all requirements of the Liberal Education Program.  
3. Students must complete a minimum of 120 semester credits.  
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.  
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.  
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.  
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.  
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.  

Program Requirements  
1. A minor or second major is not required for B.S.E.P.  

Physics (14 cr)  
PHYS 2021 - Relativity and Quantum Physics (4.0 cr)  
PHYS 2022 - Classical Physics (4.0 cr)  
PHYS 2033 - Classical and Quantum Physics Lab (2.0 cr)  
PHYS 4001 - Classical Mechanics (4.0 cr)  

Engineering Core Courses (25 cr)  
Additional courses  
EE 2111 - Linear Systems and Signal Analysis (4.0 cr)  
EE 2212 - Electronics I (4.0 cr)  
EE 3235 - Electronics II (4.0 cr)  
EE 3445 - Electromagnetic Fields (3.0 cr)  
ME 2105 - Introduction to Material Science for Engineers (3.0 cr)  
ME 2211 - Thermodynamics [SUSTAIN] (3.0 cr)  

Senior Project  
EE 4899 - Senior Design Project I (1.0 cr)  
EE 4999 - Senior Design Project II (3.0 cr)  
 or ME 4255 - Multidisciplinary Senior Design (4.0 cr)  

Courses From Other Programs (13 - 14 cr)  
Computer Science  
CS 1411 - Introduction to Programming in Matlab (4.0 cr)
Program Sub-plans

Students are required to complete one of the following sub-plans.

Materials
An interdisciplinary field, which deals with the discovery and design of new materials. This sub-plan prepares students for a career in industry or graduate study in Materials Science and Engineering.

Materials (12 cr)
- IE 3130 - Materials Processing Engineering (3.0 cr)
- ME 3140 - System Dynamics and Control (3.0 cr)
- ME 3230 - Kinematics and Mechatronics (3.0 cr)

Electives
Take 3 or more credit(s) from the following:
- EE 4611 - Introduction to Solid-State Semiconductors (3.0 cr)
- EMGT 4110 - Engineering Professionalism and Practice (2.0 cr)
- ME 5315 - Nondestructive Evaluation of Engineering Materials (3.0 cr)
- ME 5345 - Smart Materials and Structures (3.0 cr)

Systems
The application of engineering and physical principles and design concepts to enable the realization of successful systems. Successful systems must satisfy the needs of their customers, users, and other stakeholders. This sub-plan is good preparation for students who want a career in industry or entry into graduate school.

Systems (12 cr)
- ENGR 1222 - Introduction to Solid Modeling (2.0 cr)
- ME 3140 - System Dynamics and Control (3.0 cr)
- ME 3230 - Kinematics and Mechatronics (3.0 cr)

Electives
Take 4 or more credit(s) from the following:
- EMGT 4110 - Engineering Professionalism and Practice (2.0 cr)
- ME 4050 - Fundamentals of Nuclear Engineering (3.0 cr)
- ME 4060 - Machine Vision and Image Based Robot Control (3.0 cr)
- ME 4135 - Robotics and Controls (3.0 cr)
- ME 4145 - CAD/CAM (4.0 cr)
- ME 4175 - Machine Design (3.0 cr)
Duluth Campus
Environmental Engineering Minor
Chemical Engineering
Swenson College of Science and Engineering

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 54 to 58

The environmental engineering minor develops a student's ability to understand and address environmental concerns. Coursework provides broad-based science and engineering knowledge suited to pollution prevention and waste management. The minor enhances degrees in science or other engineering fields.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Lower Division (38-40 cr)
Chemistry I
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
Chemistry II
CHEM 1155 - General Chemistry II (4.0 cr)
CHEM 1156 - General Chemistry Lab II (1.0 cr)
Chemical Engineering
CHE 2111 - Material and Energy Balances (3.0 cr)
or CHE 2211 - Materials and Energy Balances (4.0 cr)
CHE 1011 - Introduction to Chemical Engineering [LE CAT5] (3.0 cr)
or CHE 2001 - Introduction to Environmental Engineering (3.0 cr)
Analytical Chemistry
CHEM 2212 - Environmental Chemistry [NAT SCI, SUSTAIN] (4.0 cr)
or CHEM 2222 - Quantitative Analysis (3.0 cr)
CHEM 2223 - Quantitative Analysis Laboratory (1.0 cr)
Math
MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
Physics
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)
Electives
Take 1 or more course(s) from the following:
• CHE 2011 - Design of Engineering Experiments (3.0 cr)
• STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
• STAT 3411 - Engineering Statistics (3.0 cr)
• STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Upper Division Requirements (10 cr)
Students taking CE 3025 should replace CHE 1011 or CHE 2001 with an additional upper division elective.
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
CE 3221 - Fluid Mechanics (3.0 cr)
or CHE 3111 - Fluid Mechanics (3.0 cr)
or ME 3111 - Fluid Mechanics (3.0 cr)
CE 3025 - Environmental Engineering [SUSTAIN] (4.0 cr)
or CHE 3112 - Heat and Mass Transfer (3.0 cr)
or ME 4112 - Heat and Mass Transfer (3.0 cr)
Upper Division Electives (6-8 cr)
Other upper division electives may be substituted subject to department approval. Take 2 or more course(s) from the following:

- BIOL 5807 - Mathematical Ecology (3.0 cr)
- CE 3225 - Hydraulics and Hydrology (3.0 cr)
- CE 4215 - Hydraulic Design (3.0 cr)
- CE 4237 - Water Quality Engineering (3.0 cr)
- CE 4256 - Design of Water and Waste Water Treatment Plants (3.0 cr)
- CE 4257 - Municipal Solid Waste Management and Hazardous Waste Systems (3.0 cr)
- CE 4515 - Sustainable Design [SUSTAIN] (3.0 cr)
- CE 5201 - Water Policy (3.0 cr)
- CE 5216 - Applications in Environmental Modeling (3.0 cr)
- CE 5226 - Water Resources Engineering (3.0 cr)
- CE 5237 - Water Quality Engineering (3.0 cr)
- CE 5410 - Applied Geostatistics (3.0 cr)
- CE 5515 - Sustainable Design and Construction (SUSTAIN) (3.0 cr)
- CHE 4601 - Biochemical Engineering I (3.0 cr)
- CHE 4603 - Biorenewable Resources [SUSTAIN] (3.0 cr)
- CHE 4613 - Air Pollution Control (3.0 cr)
- CHE 5601 - Biochemical Engineering I (3.0 cr)
- CHE 5610 - Recycling Process Engineering (3.0 cr)
- CHE 5612 - Hazardous Waste Process Engineering (3.0 cr)
- ES 3500 - Ecological Economics (3.0 cr)
- ESCL 3201 - Mineral Resources (3.0 cr)
- ESCL 3202 - Energy Resources (3.0 cr)
- GEOL 3100 - Earth's Climate and Environment: Past and Future (3.0 cr)
- GEOL 5240 - Physical Hydrogeology (4.0 cr)
- GEOL 5250 - Hydrogeology (4.0 cr)
- ME 4050 - Fundamentals of Nuclear Engineering (3.0 cr)
- ME 4365 - Global Sustainability Experience in Design/Manufacturing in Africa (3.0 cr)
- ME 5305 - Computational Fluid Dynamics (3.0 cr)
- ME 5325 - Sustainable Energy System (3.0 cr)
- ME 5335 - Introduction to Finite Element Analysis (3.0 cr)
Duluth Campus
Environmental Science B.S.
D Earth & Environmental Sci
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 99 to 103
- Degree: Bachelor of Science

The BS in environmental science is designed for students who want a multidisciplinary science education focusing on aspects of the environment. This environmental science program requires a broad base of knowledge in the basic sciences and mathematics, physics, chemistry, biology, Earth sciences, and statistics. In addition, prudent study of environmental science requires understanding of economic, political, and ethical considerations. Environmental science features an intense grounding in resource issues (including courses in renewable and non-renewable resources) and builds on the strength of UMD in freshwater issues. In addition, the capstone course deals with sources, distribution, and ultimate fate of air, water, and solid waste pollution. Elective courses from areas such as habitats, climate processes, environmental chemistry, quantitative methods, and global resources are also required.

The program is predicated on the belief that a student graduating with a BS in environmental science should have a firm background in physical and life sciences and a basic understanding of 1) existing environmental policies and regulations and the legislative process of their formation; 2) the major environmental issues including water, global climate, energy, pollution, and population; 3) techniques of environmental monitoring and prediction; and 4) economics and business organization.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For entering freshmen, the only admission requirement is acceptance into the College of Science and Engineering. Transfer students must meet campus and college requirements and are accepted into the program at the level corresponding to credits completed, based on existing transfer manuals and on faculty judgment when courses are not in existing manuals.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
Required Environmental Science Core (16 cr)
CHE 4613 - Air Pollution Control (3.0 cr)
ESCI 2210 - Environmental Characterization and Monitoring (4.0 cr)
ESCI 3201 - Mineral Resources (3.0 cr)
ESCI 3202 - Energy Resources (3.0 cr)
ESCI 4102 - Environmental Assessment (3.0 cr)

Required Courses From Other Programs (65 - 66 cr)
Biology
BIOL 1011 - General Biology I [LE CAT4, NAT SCI] (5.0 cr)
BIOL 1012 - General Biology II [SUSTAIN] (5.0 cr)
BIOL 2801 - General Ecology (3.0 cr)
BIOL 2802 - Ecology Laboratory (2.0 cr)

Chemistry I and lab
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Chemistry II and lab
CHEM 1155 - General Chemistry II (4.0 cr)
CHEM 1156 - General Chemistry Lab II (1.0 cr)

Analytical Chemistry
CHEM 2212 - Environmental Chemistry [NAT SCI, SUSTAIN] (4.0 cr)
or CHEM 2222 - Quantitative Analysis (3.0 cr)
CHEM 2223 - Quantitative Analysis Laboratory (1.0 cr)

Economics
ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
or ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Geology
GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
GEOL 3100 - Earth's Climate and Environment: Past and Future (3.0 cr)
or GEOG 3401 - Weather and Climate (3.0 cr)

Mathematics
MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Physics I course
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

Physics I lab
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Physics II course
PHYS 2015 - General Physics II (4.0 cr)
or PHYS 2018 - Honors General Physics II (4.0 cr)

Physics II lab
PHYS 2016 - General Physics Lab II (1.0 cr)

Statistics
STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)
or STAT 3411 - Engineering Statistics (3.0 cr)
or STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Advanced Writing
WRIT 3150 - Advanced Writing: Science (3.0 cr)

Water Science Electives (8-11 cr)
Must include three courses, at least one course each from Group A and B. Courses used to satisfy a water science elective may not be used to satisfy a concentration elective. At least one course used to fill the water science electives or the concentration electives must have a laboratory or field component.
Take 3 or more course(s) totaling 8 - 11 credit(s) from the following:

Group A Groundwater
Take 1 - 2 course(s) from the following:
• GEOL 5240 - Physical Hydrogeology (4.0 cr)
• GEOL 5250 - Hydrogeology (4.0 cr)
• GEOL 4710 - Aqueous Geochemistry (4.0 cr)
• GEOL 5251 - Well Hydraulics (3.0 cr)

Group B Surface Water
Take 1 - 2 course(s) from the following:
• BIOL 3760 - Marine Biology (3.0 cr)
• BIOL 3761 - Field Studies in Marine Biology (4.0 cr)
• BIOL 3830 - Aquatic Food Webs (3.0 cr)
• BIOL 3835 - Freshwater Ecology (3.0 cr)
• BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
• BIOL 5777 - Plankton Biology (2.0 cr)
• BIOL 5805 - Fisheries Ecology and Management (3.0 cr)
• BIOL 5833 - Stream Ecology (3.0 cr)
• BIOL 5861 - Lake Ecology (3.0 cr)
• BIOL 5870 - Wetland Ecology (3.0 cr)
• GEOG 4446 - Water Processes and Management (3.0 cr)
• GEOL 4201 - Introduction to Watershed Hydrology (3.0 cr)
• LIM 5004 [Inactive] (2.0 cr)
• LIM 5101 - Physical Limnology (3.0 cr)
• LIM 5102 - Chemical Limnology (3.0 cr)
• LIM 5103 - Geological Paleolimnology (3.0 cr)

Concentration Electives (10 cr)
Courses can be distributed among the groups in any combination. Discuss with advisor the benefits of breadth (credits in several concentrations) versus depth (credits in a particular concentration).

Take 10 or more credit(s) from the following:

Climate Processes
Take 0 - 10 credit(s) from the following:
• GEOG 3422 - Natural Hazards (3.0 cr)
• GEOG 4446 - Water Processes and Management (3.0 cr)
• GEOL 3210 - Geomorphology (4.0 cr)
• GEOL 5210 - Glacial and Quaternary Geology (4.0 cr)
• GEOL 5220 - Advances in Paleoclimatology (3.0 cr)
• LIM 5103 - Geological Paleolimnology (3.0 cr)
• GEOL 3100 - Earth's Climate and Environment: Past and Future (3.0 cr)
  or GEOG 3401 - Weather and Climate (3.0 cr)

Environmental Chemistry
Take 0 - 10 credit(s) from the following:
• CHEM 2541 - Organic Chemistry I (3.0 cr)
• CHEM 2542 - Organic Chemistry II (3.0 cr)
• CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)
• CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)
• GEOL 3710 - Introduction to Geochemistry (3.0 cr)
• GEOL 4710 - Aqueous Geochemistry (4.0 cr)
• LIM 5102 - Chemical Limnology (3.0 cr)

Global Resources
Take 0 - 10 credit(s) from the following:
• ECON 3721 - Natural Resource and Energy Economics (3.0 cr)
• ECON 3777 - Environmental Economics (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• GEOG 4451 - The Geography of Soils (4.0 cr)
• GEOL 3800 - Principles of Geophysics (4.0 cr)
• GEOL 5240 - Physical Hydrogeology (4.0 cr)
• GEOL 5250 - Hydrogeology (4.0 cr)
• GEOL 4355 - Economic Geology (4.0 cr)

Habitats
Take 0 - 10 credit(s) from the following:
• BIOL 3760 - Marine Biology (3.0 cr)
• BIOL 3761 - Field Studies in Marine Biology (4.0 cr)
• BIOL 3830 - Aquatic Food Webs (3.0 cr)
• BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
• BIOL 5777 - Plankton Biology (2.0 cr)
• BIOL 5801 - Microbial Ecology (2.0 cr)
• BIOL 5802 [Inactive] (2.0 cr)
• BIOL 5805 - Fisheries Ecology and Management (3.0 cr)
• BIOL 5808 - Landscape Ecology: Theory and Application (3.0 cr)
• BIOL 5833 - Stream Ecology (3.0 cr)
• BIOL 5861 - Lake Ecology (3.0 cr)
• BIOL 5865 - Conservation Biology (2.0 cr)
• BIOL 5870 - Wetland Ecology (3.0 cr)
• GEOL 4201 - Introduction to Watershed Hydrology (3.0 cr)
Quantitative Methods
Take 0 - 10 credit(s) from the following:

- BIOL 5807 - Mathematical Ecology (3.0 cr)
- CHE 2111 - Material and Energy Balances (3.0 cr)
- CHE 2121 - Chemical Engineering Thermodynamics (3.0 cr)
- CHE 3111 - Fluid Mechanics (3.0 cr)
- CHE 5022 - Transport Processes in Wells and Pipelines (3.0 cr)
- GIS 3563 - Geographic Information Science I: Theory and Analysis (4.0 cr)
- GIS 3564 - Geographic Information Science II: Applied GIS (4.0 cr)
- GIS 5572 - Environmental Application of GIS (4.0 cr)
- GIS 5581 - Digital Image Processing and Analysis (4.0 cr)
- LIM 5004 (Inactive) (2.0 cr)
- LIM 5101 - Physical Limnology (3.0 cr)
- MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
- PHYS 5053 - Data Analysis Methods in Physics (3.0 cr)
- PHYS 5541 - Fluid Dynamics (3.0 cr)
- STAT 5411 - Analysis of Variance (3.0 cr)
Duluth Campus

Environmental Science Minor

D Earth & Environmental Sci

Swenson College of Science and Engineering

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 28

The environmental science minor enhances a student's understanding of the scope of environmental problems, the biochemical and physical processes of environmental degradation, the sciences of non-renewable and renewable resources, and economic and political issues surrounding environmental problems. The minor provides valuable background for many environmental careers and applications.

Program Delivery

This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

ES Minor Requirements (24 cr)

- GEO 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
- ESCI 2210 - Environmental Characterization and Monitoring (4.0 cr)
- ESCI 3201 - Mineral Resources (3.0 cr)
- ESCI 3202 - Energy Resources (3.0 cr)

Chemistry I with lab

- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Chemistry II with lab

- CHEM 1155 - General Chemistry II (4.0 cr)
- CHEM 1156 - General Chemistry Lab II (1.0 cr)

Minor Electives (4 cr)

Take 2 or more course(s) totaling 4 or more credit(s) from the following:

- BIOL 3760 - Marine Biology (3.0 cr)
- BIOL 3761 - Field Studies in Marine Biology (4.0 cr)
- BIOL 3830 - Aquatic Food Webs (3.0 cr)
- BIOL 3835 - Freshwater Ecology (3.0 cr)
- BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
- BIOL 5777 - Plankton Biology (2.0 cr)
- BIOL 5801 - Microbial Ecology (2.0 cr)
- BIOL 5802 - (Inactive) (2.0 cr)
- BIOL 5805 - Fisheries Ecology and Management (3.0 cr)
- BIOL 5807 - Mathematical Ecology (3.0 cr)
- BIOL 5808 - Landscape Ecology: Theory and Application (3.0 cr)
- BIOL 5833 - Stream Ecology (3.0 cr)
- BIOL 5861 - Lake Ecology (3.0 cr)
- BIOL 5863 - Ecosystems Ecology and Geochemistry (3.0 cr)
- BIOL 5865 - Conservation Biology (2.0 cr)
- BIOL 5870 - Wetland Ecology (3.0 cr)
- CHE 2111 - Material and Energy Balances (3.0 cr)
- CHE 2121 - Chemical Engineering Thermodynamics (3.0 cr)
- CHE 3111 - Fluid Mechanics (3.0 cr)
- CHE 5022 - Transport Processes in Wells and Pipelines (3.0 cr)
- CHEM 2541 - Organic Chemistry I (3.0 cr)
- CHEM 2542 - Organic Chemistry II (3.0 cr)
- CHEM 2543 - Organic Chemistry I Laboratory (1.0 cr)
- CHEM 2544 - Organic Chemistry II Laboratory (1.0 cr)
- ECON 3721 - Natural Resource and Energy Economics (3.0 cr)
- ECON 3777 - Environmental Economics (3.0 cr)
• GEOG 3422 - Natural Hazards (3.0 cr)
• GEOG 3461 - Geography of Global Resources [SUSTAIN] (3.0 cr)
• GEOG 4446 - Water Processes and Management (3.0 cr)
• GEOG 4451 - The Geography of Soils (4.0 cr)
• GEOL 3210 - Geomorphology (4.0 cr)
• GEOL 3710 - Introduction to Geochemistry (3.0 cr)
• GEOL 3800 - Principles of Geophysics (4.0 cr)
• GEOL 4355 - Economic Geology (4.0 cr)
• GEOL 4710 - Aqueous Geochemistry (4.0 cr)
• GEOL 5210 - Glacial and Quaternary Geology (4.0 cr)
• GEOL 5220 - Advances in Paleoclimatology (3.0 cr)
• GEOL 5240 - Physical Hydrogeology (4.0 cr)
• GEOL 5250 - Hydrogeology (4.0 cr)
• GEOL 5251 - Well Hydraulics (3.0 cr)
• GIS 3563 - Geographic Information Science I: Theory and Analysis (4.0 cr)
• GIS 5572 - Environmental Application of GIS (4.0 cr)
• GIS 5581 - Digital Image Processing and Analysis (4.0 cr)
• LIM 5004 [Inactive] (2.0 cr)
• LIM 5101 - Physical Limnology (3.0 cr)
• LIM 5102 - Chemical Limnology (3.0 cr)
• LIM 5103 - Geological Paleolimnology (3.0 cr)
• MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
• PHYS 5053 - Data Analysis Methods in Physics (3.0 cr)
• PHYS 5541 - Fluid Dynamics (3.0 cr)
• STAT 5411 - Analysis of Variance (3.0 cr)
• GEOG 3401 - Weather and Climate (3.0 cr)
  or GEOL 3100 - Earth's Climate and Environment: Past and Future (3.0 cr)
Duluth Campus
Geological Sciences B.A.
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 61 to 64
- This program requires summer terms.
- Degree: Bachelor of Arts

Geological sciences is the scientific study of the origin, history, and structure of the Earth. The study of geology requires a broad base of knowledge in related sciences and mathematics.

The BA in geological sciences provides an appropriate educational background for work in areas related to environmental studies, land use planning, and other fields requiring sensitivity to Earth systems.

Honors Requirements: To attain departmental honors, students must undertake an independent research project and maintain a cumulative overall GPA of 3.00. The research can be part of a UROP, directed research, independent study, or an internship with a faculty member. Students must either make a brief oral presentation to the department summarizing their results and produce a research paper (minimum 10 pages) OR give an oral or poster presentation of their research results at a regional or national meeting (e.g. GSA, AGU, ILSG, or similar campus event).

Program Delivery
This program is available:
  - via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current students who change from a BS degree or change colleges may request to be waived from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
1. A minor or a second major in a different subject is required.

2. Math courses determined by Math ACT score.

Geology Core Courses (38-39 cr)
GEOL 2110 - Earth History (4.0 cr)
GEOL 2120 - The Earth's Dynamic Interior (3.0 cr)
GEOL 2311 - Mineralogy (4.0 cr)
GEOL 2312 - Petrology (5.0 cr)
GEOL 3210 - Geomorphology (4.0 cr)
GEOL 3420 - Sedimentology and Stratigraphy (4.0 cr)
GEOL 4450 - Structural Geology (5.0 cr)
GEOL 4500 - Field Geology (6.0 cr)

Take 1 or more course(s) from the following:
• GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
• GEOL 1130 - Introduction to Environmental Science [LE CAT4, LEIP CAT04, NAT SCI, SUSTAIN] (4.0 cr)
• GEOL 1610 - Oceanography [LE CAT5, NAT SCI, SUSTAIN] (3.0 cr)
• GEOG 1414 - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)

Advanced Electives (6 cr)
GEOL 4110 or 4180 cannot be used.

Take 6 or more credit(s) from the following:
• ESCI 3202 - Energy Resources (3.0 cr)
• GEOL 3xxx
• GEOL 4xxx
• GEOL 5xxx
• GIS 3563 - Geographic Information Science I: Theory and Analysis (4.0 cr)
• LIM 5xxx

Chemistry requirement (10 cr)
Take one of the following course sequences:
Chemistry
CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
CHEM 1114 - Introduction to General, Organic, and Biological Chemistry II (5.0 cr)

or Chemistry I and II with labs
CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
CHEM 1155 - General Chemistry II (4.0 cr)
CHEM 1156 - General Chemistry Lab II (1.0 cr)

Mathematics Requirement (3-5 cr)
Take 1 or more course(s) from the following:
• MATH 1250 - Precalculus Analysis [LE CAT2, LOGIC & QR] (4.0 cr)
• MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
• MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
• STAT 2411 - Statistical Methods [LE CAT2, LOGIC & QR] (3.0 cr)

Advanced Writing Requirement (3 cr)
WRIT 3150 - Advanced Writing: Science (3.0 cr)
Duluth Campus
Geological Sciences BS
D Earth & Environmental Sci
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 84 to 98
- This program requires summer terms.
- Degree: Bachelor of Science

The study of geology provides ways of understanding and appreciating dynamic earth processes, our physical environment, and our place in the long and complex history of the planet and solar system. It is by nature interdisciplinary and attracts students with broad interest in earth science, archaeology, astronomy, biology, chemistry, engineering, environmental science, applied mathematics, oceanography, limnology and/or physics. The BS degree in geological sciences can lead to rewarding careers in industry, government, conservation, law, business, and academia.

Geology requires a solid base of knowledge in related sciences (chemistry and physics) and mathematics, as well as a solid core of geology courses. A summer course in field mapping is also required.

The BS degree with the exploration and mining track is designed for students interested in a career in the exploration and mining industries. The track includes a solid core of geoscience courses with a focus on courses related to exploration and mining geology. A summer course in field mapping is also required.

Honors requirements: To attain department honors, students must undertake an independent research project and maintain a cumulative overall GPA of 3.00. The research can be part of a UROP, directed research, independent study, or an internship with a faculty member. Students must either make a brief oral presentation to the department summarizing their results and produce a research paper (minimum 10 pages) OR give an oral or poster presentation of their research results at a regional or national meeting (e.g., GSA, AGU, ILSG, or similar campus event).

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
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General Requirements
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1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.
Program Requirements
1. A minor or a second major in a different subject is required.

Geology Core Courses (42-43 cr)
- GEOL 2110 - Earth History (4.0 cr)
- GEOL 2120 - The Earth's Dynamic Interior (3.0 cr)
- GEOL 2311 - Mineralogy (4.0 cr)
- GEOL 2312 - Petrology (5.0 cr)
- GEOL 3210 - Geomorphology (4.0 cr)
- GEOL 3420 - Sedimentology and Stratigraphy (4.0 cr)
- GEOL 3800 - Principles of Geophysics (4.0 cr)
- GEOL 4450 - Structural Geology (5.0 cr)
- GEOL 4500 - Field Geology (6.0 cr)
- GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
  or GEOL 1130 - Introduction to Environmental Science [LE CAT4, LEIP CAT04, NAT SCI, SUSTAIN] (4.0 cr)
  or GEOL 1610 - Oceanography [LE CAT5, NAT SCI, SUSTAIN] (3.0 cr)
  or GEOG 1414 - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)

Advanced Electives (4 - 9 cr)
Geological Sciences BS students pursuing the exploration and mining track are required to take 4 credits, all other students are required to take 9 credits. GEOL 4110 and 4180 cannot be used.

Take 4 - 9 credit(s) from the following:
- AST 4110 - Observational Astronomy (3.0 cr)
- ESCI 3202 - Energy Resources (3.0 cr)
- GEOL 3xxx
- GEOL 4xxx
- GEOL 5xxx
- GIS 3563 - Geographic Information Science I: Theory and Analysis (4.0 cr)
- GIS 3564 - Geographic Information Science II: Applied GIS (4.0 cr)
- LIM 5004 (Inactive) (2.0 cr)
- LIM 5101 - Physical Limnology (3.0 cr)
- LIM 5102 - Chemical Limnology (3.0 cr)
- LIM 5103 - Geological Paleoecology (3.0 cr)
- LIM 5104 - Geochemical, Physical, and Biological processes in Aquatic Sediments (2.0 cr)
- LIM 5105 - Research Frontiers and New Directions in Limnology and Environmental Science (1.0 cr)

Courses Required From Other Programs (33 cr)

Mathematics
- Calculus I
  - MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
  - MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

- Calculus II
  - MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Physics
- Introduction to Physics I and II
  - PHYS 1001 - Introduction to Physics I [LE CAT4, NAT SCI] (5.0 cr)
  - PHYS 1002 - Introduction to Physics II (5.0 cr)

- General Physics I and II with labs
  - PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
    - PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)
  - PHYS 2015 - General Physics II (4.0 cr)
    - PHYS 2016 - General Physics Lab II (1.0 cr)

Chemistry I and II with labs
- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
- CHEM 1155 - General Chemistry II (4.0 cr)
- CHEM 1156 - General Chemistry Lab II (1.0 cr)

Advanced Writing
- WRIT 3150 - Advanced Writing: Science (3.0 cr)
Program Sub-plans
A sub-plan is not required for this program.

Exploration and Mining Geology
The exploration and mining geology track is designed for students interested in a career in the exploration and/or mining industries. The track includes a solid core of geoscience courses with a focus on courses related to exploration and mining geology. The track includes a course in field mapping.

Students completing the exploration and mining geology track are required to take the 42-43 credits of geology core courses required of all students. They are only required to take 4 credits of advanced electives along with 33 credits of courses required from other programs (listed above). They must also complete the requirements below.

Core Courses (11 cr)
- GEOL 3000 - Geologic Maps (3.0 cr)
- GEOL 4355 - Economic Geology (4.0 cr)
- GEOL 4360 - Geologic, Geophysical, and Geochemical Methods of Exploration (4.0 cr)

Courses from other programs (7 cr)
- CHE 4141 - Material and Minerals Processing (3.0 cr)
- STAT 3611 - Introduction to Probability and Statistics (4.0 cr)
Duluth Campus
Geological Sciences Minor
D Earth & Environmental Sci
Swenson College of Science and Engineering

• Program Type: Undergraduate minor related to major
• Requirements for this program are current for Fall 2018
• Required credits in this minor: 27 to 29

The geological sciences minor enhances the student’s understanding of and familiarity with earth materials and processes, and provides valuable background for many environmental careers and applications.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Minor Requirements
Minor Courses (23-24 cr)
GEOL 2110 - Earth History (4.0 cr)
GEOL 2120 - The Earth’s Dynamic Interior (3.0 cr)
GEOL 2311 - Mineralogy (4.0 cr)
GEOL 3210 - Geomorphology (4.0 cr)
GEOL 1110 - Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
  or GEOL 1130 - Introduction to Environmental Science [LE CAT4, LEIP CAT04, NAT SCI, SUSTAIN] (4.0 cr)
  or GEOL 1610 - Oceanography [LE CAT5, NAT SCI, SUSTAIN] (3.0 cr)
  or GEOG 1414 - Physical Geography [LE CAT4, NAT SCI, SUSTAIN] (4.0 cr)
CHEM 1113 - Introduction to General, Organic, and Biological Chemistry I [LE CAT4, NAT SCI] (5.0 cr)
  or CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
  or CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

Electives (4-5 cr)
Take 1 or more course(s) totaling 4 or more credit(s) from the following:
• ESCI 3202 - Energy Resources (3.0 cr)
• GEOL 2312 - Petrology (5.0 cr)
• GEOL 3420 - Sedimentology and Stratigraphy (4.0 cr)
• GEOL 4450 - Structural Geology (5.0 cr)
• GEOL 5240 - Physical Hydrogeology (4.0 cr)
• GEOL 5250 - Hydrogeology (4.0 cr)
Duluth Campus
Industrial Engineering B.S.I.E.
UMD Mechanical/Industrial Engineering
Swenson College of Science and Engineering

• Program Type: Baccalaureate
• Requirements for this program are current for Fall 2018
• Required credits to graduate with this degree: 126 to 128
• Required credits within the major: 117 to 119
• Degree: Bachelor of Science in Industrial Engineering

The mission of the bachelor of science in industrial engineering program is to deliver a hands-on, laboratory-intensive undergraduate education that provides students with the tools and skills to excel in the profession as they pursue lifelong learning and make positive contributions to society. The program emphasizes integrated systems and offers unique opportunities for undergraduate research.

The educational objectives of the industrial engineering program are to produce graduates who:

1. Solve industrial engineering problems by applying contemporary engineering tools to propose and implement effective solutions.

2. Design, develop, implement, and improve integrated systems that include people, materials, information, equipment, and energy.

3. Contribute as informed, ethical, and responsible members of the engineering profession and society as a whole.

4. Continue lifelong professional development throughout their careers.

5. Collaborate and communicate effectively with others as members or leaders of engineering or multidisciplinary teams in international settings.

Industrial engineering integrates topics from manufacturing, management, service, and traditional design. Industrial engineers are proficient in the design, improvement, and management of complex systems of people, materials, equipment, and energy. They study and adapt product designs and the associated plant facilities to optimize production, while considering economic, technical, and human factors.

The curriculum rounds out the learning experience by providing skills in the mathematical and physical sciences, economics, composition, and humanities and social sciences.

The industrial engineering program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

The industrial engineering program emphasizes the overall perspective of people and productivity in any type of system, including manufacturing, service, health care, transportation, communication, and agriculture.

Honors requirements: To graduate with department honors, a student must graduate with a 3.40 GPA, be an active member of Tau Beta Pi or a professional engineering society (ASME, ASSE, IIE, MSPE, SME or SWE), and be nominated by a department faculty member.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

Freshman, sophomores, and transfer students may declare an IE major and be admitted to lower division status. Admission to upper division B.S.I.E. program is competitive and based on performance in lower division courses, and space availability. To be considered, students must complete the MIE Application to upper division. The following requirements must be met:

1. Completion of the following courses or their transfer equivalents:
   - WRIT 1120
   - CS 1121 or 1411 or 1511 or 2121
   - ENGR 1222
   - CE 2017
2. A minimum cumulative University of Minnesota, Duluth GPA of 2.50

Applicants not meeting these requirements may be admitted to the upper division B.S.I.E. program on a space-available basis with priority determined by cumulative University of Minnesota, Duluth GPA.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

**General Requirements**

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

**Program Requirements**

1. A minor or second major is not required for B.S.I.E.
2. Students must submit application to the upper division B.S.I.E. program and, if accepted, must remain in good academic standing. BSIE upper division students placed on academic probation will also be removed from upper division BSIE status and will not be readmitted to BSIE upper division until they achieve good academic standing with the University.

Students must complete a minimum of 32 credits of math and science courses. The mechanical engineering curriculum uses the math and science required courses, listed below, to meet this requirement. Courses transferred from other institutions may transfer with fewer credits than the UMD equivalent(s). In this case, to reach the 32 credit minimum, additional coursework within the approved subjects of BIOL, CHEM, ESCI, GEOL, MATH, PHYS, and STAT at the 1xxx - 4xxx level, can be applied to satisfy this credit difference.

**Math and Science Required Courses (32 cr)**

Students who transfer courses with fewer credits than the UMD equivalent(s) must complete an additional approved math or science credits as noted above.

- **Chemistry I with lab**
  - CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
  - CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

- **Mathematics and Statistic**
  - MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
  - MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
  - MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
  - STAT 3411 - Engineering Statistics (3.0 cr)

- **Physics I course**
  - PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
  - or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

- **Physics I lab**
  - PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

- **Physics II course**
PHYS 2015 - General Physics II (4.0 cr)
or PHYS 2018 - Honors General Physics II (4.0 cr)

Physics II lab
PHYS 2016 - General Physics Lab II (1.0 cr)

B.S.I.E. Core and Engineering Courses (58 cr)
Required courses include fundamental material in civil engineering, electrical engineering, engineering management, engineering science, industrial engineering, and mechanical engineering. Concepts are delivered in lecture and reinforced in lab experiences.

EE 2006 - Electrical Circuit Analysis (4.0 cr)
EMGT 4110 - Engineering Professionalism and Practice (2.0 cr)
ENGR 1210 - Introduction to Engineering (2.0 cr)
ENGR 1222 - Introduction to Solid Modeling (2.0 cr)
IE 3115 - Operations Research (4.0 cr)
IE 3122 - Materials Engineering Laboratory (2.0 cr)
IE 3255 - Engineering Economic Analysis [SOC SCI] (3.0 cr)
IE 3130 - Materials Processing Engineering (3.0 cr)
IE 3140 - Human Factors and Ergonomic Design (3.0 cr)
IE 3222 - Occupational Systems Laboratory (2.0 cr)
IE 4010 - Six Sigma Quality Control (3.0 cr)
IE 4020 - Lean Production Management (3.0 cr)
IE 4115 - Facility Planning and Simulation (4.0 cr)
IE 4222 - Systems Integration Laboratory (2.0 cr)
IE 4230 - Systems Integration (3.0 cr)
IE 4255 - Multidisciplinary Senior Design (4.0 cr)
IE 4993 - Industrial Engineering Seminar (1.0 cr)
ME 2105 - Introduction to Material Science for Engineers (3.0 cr)
ME 2226 - Dynamics (3.0 cr)

Industrial Engineering Electives (3 cr)
These courses help an industrial engineer develop systems skills in technical areas. (Cannot count credits from other requirement categories.)
Take 3 or more credit(s) from the following:
• IE 4495 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
• IE 5305 - Supply Chain Management (3.0 cr)
• IE 5315 - Organizational Control Methods (3.0 cr)
• IE 5325 - Advanced Engineering Economics (3.0 cr)
• IE 5335 - Engineered Products and Services (3.0 cr)

Additional Electives (9 cr)
(Cannot count credits from other requirement categories.)
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
• CHE 2111 - Material and Energy Balances (3.0 cr)
• CS 1521 - Computer Science II (5.0 cr)
• CS 1315 - Digital Logic (4.0 cr)
• EE 2111 - Linear Systems and Signal Analysis (4.0 cr)
• EE 2212 - Electronics I (4.0 cr)
• EE 2325 - Microprocessor Systems (4.0 cr)
• EE 3151 - Control Systems (4.0 cr)
• EE 5995 - Special Topics: (Various Titles to be Assigned) (1.0 - 3.0 cr)
• IE 4196 - Cooperative Education I (1.0 cr)
• IE 4197 - Industrial Engineering Internship (1.0 cr)
• IE 4296 - Cooperative Education II (2.0 cr)
• IE 4297 - Industrial Engineering Internship (2.0 cr)
• IE 4491 - Independent Study (1.0 - 4.0 cr)
• IE 4993 - Industrial Engineering Seminar (1.0 cr)
• IE 5305 - Supply Chain Management (3.0 cr)
• IE 5315 - Organizational Control Methods (3.0 cr)
• IE 5325 - Advanced Engineering Economics (3.0 cr)
• IE 5335 - Engineered Products and Services (3.0 cr)
• IE 5991 - Independent Study in Industrial Engineering (1.0 - 4.0 cr)
• MATH 3298 - Calculus III (4.0 cr)
• MATH 3355 - Discrete Mathematics (4.0 cr)
• ME 2211 - Thermodynamics [SUSTAIN] (3.0 cr)
• ME 3010 - Fundamentals of Machining and Manufacturing (3.0 cr)
• **ME 3140** - System Dynamics and Control (3.0 cr)
• **ME 4135** - Robotics and Controls (3.0 cr)
• **ME 4145** - CAD/CAM (4.0 cr)
• **ME 4175** - Machine Design (3.0 cr)
• **ME 4365** - Global Sustainability Experience in Design/Manufacturing in Africa (3.0 cr)
• **ME 4495** - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
• **ME 5315** - Nondestructive Evaluation of Engineering Materials (3.0 cr)
• **ME 5325** - Sustainable Energy System (3.0 cr)
• **MGTS 4472** - Entrepreneurship (3.0 cr)
• **STAT 5411** - Analysis of Variance (3.0 cr)
• **STAT 5511** - Regression Analysis (3.0 cr)
• **ME 3111** - Fluid Mechanics (3.0 cr)
  or **CHE 3111** - Fluid Mechanics (3.0 cr)

Courses From Other Programs (15 - 17 cr)
These courses help engineers develop a foundation of economics and communication skills. Students entering the program as transfer students must complete each of these courses at UMD if the direct equivalent for each course did not transfer in from another institution.

**Business**
- **ACCT 2001** - Principles of Financial Accounting (3.0 cr)
  or **BLAW 2001** - The Legal Environment [LE CAT8, HUMANITIES] (3.0 cr)
  or **MGTS 1101** - Introduction to Business [LE CAT8] (3.0 cr)
  or **MKTG 3701** - Principles of Marketing (3.0 cr)

**Communication**
- **COMM 1112** - Public Speaking [LE CAT3, COMM & LAN] (3.0 cr)
  or **COMM 1222** - Interpersonal Communication [LE CAT3, LEC1 CAT03, COMM & LAN] (3.0 cr)

**Computer Science**
- **CS 1121** - Introduction to Programming in Visual BASIC.NET [LE CAT3, LOGIC & QR] (3.0 cr)
  or **CS 1411** - Introduction to Programming in Matlab (4.0 cr)
  or **CS 1511** - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
  or **CS 1581** - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
  or **CS 2121** - Introduction to Programming in Java [LE CAT3, LOGIC & QR] (3.0 cr)

**Economics**
- **ECON 1022** - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
  or **ECON 1023** - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

**Advanced Writing**
- **WRIT 3130** is preferred
- **WRIT 3130** - Advanced Writing: Engineering (3.0 cr)
  or **WRIT 3150** - Advanced Writing: Science (3.0 cr)
  or **WRIT 3180** - Honors: Advanced Writing (3.0 cr)
Duluth Campus
Materials Science and Engineering Minor
Chemical Engineering
Swenson College of Science and Engineering

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 45 to 46

Materials Science and Engineering (MSE) is a field that studies the structure, property, processing, and application of materials. The MSE minor provides students with the fundamentals of materials science and engineering and introduces them to a material focused approach to problem solving. Completion of the MSE minor requires a minimum of 45 credit hours, which include 36 hours of required courses and at least 9 hours of elective courses

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
This program presupposes 1 year of high school chemistry and a Math ACT score of 27 or higher.

### Required Courses (36 - 37 cr)

#### Chemistry I
- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)
- or CHEM 1173 - General Chemistry I for Majors [NAT SCI] (4.0 cr)
- CHEM 1174 - General Chemistry I Lab for Majors [NAT SCI] (1.0 cr)

#### Chemistry II
- CHEM 1155 - General Chemistry II (4.0 cr)
- CHEM 1156 - General Chemistry Lab II (1.0 cr)
- or CHEM 1175 - General Chemistry II for Majors (4.0 cr)
- CHEM 1176 - General Chemistry II Lab for Majors (1.0 cr)

#### Calculus I
- MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1596 [Inactive] [LE CAT2, LOGIC & QR] (5.0 cr)

#### Calculus II
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
- or MATH 1597 [Inactive] [LOGIC & QR] (5.0 cr)

#### Physics I
- PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
- or PHYS 2017 - Honors General Physics I [NAT SCI] (4.0 cr)
- PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

#### Physics II
- PHYS 2015 - General Physics II (4.0 cr)
- or PHYS 2018 - Honors General Physics II (4.0 cr)
- PHYS 2016 - General Physics Lab II (1.0 cr)

#### Engineering Materials
- CHE 3231 - Properties of Engineering Materials (3.0 cr)
- or ME 2105 - Introduction to Material Science for Engineers (3.0 cr)

#### Thermodynamics
- CHE 2121 - Chemical Engineering Thermodynamics (3.0 cr)
- or CHEM 4641 - Physical Chemistry I (3.0 cr)
- or ME 2211 - Thermodynamics [SUSTAIN] (3.0 cr)
- or PHYS 4031 - Thermal and Statistical Physics (4.0 cr)

### Required Electives (9 cr)
A maximum of two courses with the same designator.
Take 3 or more course(s) totaling 9 or more credit(s) from the following:

- **CE 3027** - Infrastructure Materials (4.0 cr)
- **CE 5027** - Advanced Concrete Materials and Repair (3.0 cr)
- **CHE 4141** - Material and Minerals Processing (3.0 cr)
- **CHE 5131** - Polymer Engineering (3.0 cr)
- **CHE 5711** - Biomedical Engineering (3.0 cr)
- **CHEM 4510** - Polymer Chemistry (3.0 cr)
- **EE 4611** - Introduction to Solid-State Semiconductors (3.0 cr)
- **IE 3122** - Materials Engineering Laboratory (2.0 cr)
- **IE 3130** - Materials Processing Engineering (3.0 cr)
- **ME 5315** - Nondestructive Evaluation of Engineering Materials (3.0 cr)
- **ME 5345** - Smart Materials and Structures (3.0 cr)
- **PHYS 5041** - Optics (3.0 cr)
- **PHYS 5531** - Introduction to Solid State Physics (3.0 cr)
Duluth Campus
Mathematics B.S.
Mathematics & Statistics
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 57
- Degree: Bachelor of Science

The program in mathematics develops competence in mathematical techniques and sharpens mathematical insight. Mathematics is fundamental to solving problems in physics, chemistry, biology, medicine, business, engineering, and technology. The mathematics major prepares students for careers in business, industry, and government and for further graduate studies.

Note: the BS in statistics and actuarial science is listed separately.

Honors Requirements: To graduate with departmental honors, a student must complete the program with an overall and department GPA of 3.50, satisfactorily complete a research project under the guidance of a department faculty member, and convey research results in a written report and in a department colloquium.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. Minor or second major from another area of study.

Double Majors ONLY:
A student pursuing a second major in Statistics and Actuarial Science can count STAT 3612 as a major elective, but no other STAT course required for the Statistics and Actuarial Science major can be counted as a major elective.
Introduction to Calculus Courses (10 cr)

**Calculus I**
Take one of the following three Calculus I courses:
- MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

**Calculus II**
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Mathematics Core Courses (23 cr)
Core courses cannot count as electives.
- MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
- MATH 3298 - Calculus III (4.0 cr)
- MATH 3355 - Discrete Mathematics (4.0 cr)
- MATH 4201 - Elementary Real Analysis (4.0 cr)
- MATH 4326 - Linear Algebra (3.0 cr)
- STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Required Mathematics Undergraduate Colloquium (1 cr)
Students must register their last semester before graduation.
- MATH 3941 - Undergraduate Colloquium (1.0 cr)

Required From Other Departments (8 cr)

**Computer Science**
- CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
- or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)

**Advanced Writing**
- Advanced Writing - WRIT 31xx (3.0 cr)

Electives (15 cr)
Take 5 courses of at least 3 credits each.
Core courses cannot count as electives.
MATH electives must be at least 3100.
Of the 5 major electives courses, at least 2 must be from MATH 4xxx-5xxx, a 3rd must be from MATH 4xxx-5xxx or STAT 5xxx.
The other 2 must be chosen from MATH 3xx - 4xx - 5xxx or STAT 3xxx - 4xxx - 5xxx.
MATH 3326 or STAT 3411 cannot count as major electives.
- Take 2 or more course(s) totaling 6 or more credit(s) from the following:
  - MATH 3xxx
  - MATH 4xxx
  - MATH 5xxx
  - STAT 3xxx
  - STAT 4xxx
  - STAT 5xxx
- Take 1 or more course(s) totaling 3 or more credit(s) from the following:
  - MATH 4xxx
  - MATH 5xxx
  - STAT 5xxx
- Take 2 or more course(s) totaling 6 or more credit(s) from the following:
  - MATH 4xxx
  - MATH 5xxx

Program Areas of Emphasis
Mathematics includes a wide variety of areas in which students can specialize: traditional mathematics (preparation for Graduate School), applied analysis, computational mathematics, discrete mathematics, and mathematics education. Although no area is required for the MATH major, students are encouraged to work with their advisors to develop a coherent major plan. See the Department of Mathematics and Statistics Web page: http://www.d.umn.edu/math for descriptions of elective course groups.
Duluth Campus

Mathematics Minor
Mathematics & Statistics
Swenson College of Science and Engineering

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 23

The minor in mathematics is based on the completion of the traditional core of calculus, differential equations, and elementary linear algebra commonly required of undergraduate physical science, engineering, and mathematics degrees. Additional, more advanced, elective classes are required, as well. The minor in mathematics certifies a student's quantitative, problem-solving, and critical thinking skills.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
Core Courses (14 cr)
- Calculus I
  - MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
  - or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- Calculus II
  - MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Core Course
- MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)

Electives (9 cr)
Each course must be a minimum of 3 credits. MATH 3326 not allowed in electives. STAT 3411 OR STAT 3611 may be taken but both cannot be taken as required elective credit.
Take 3 or more course(s) totaling 9 or more credit(s) from the following:
- MATH 3xxx
- MATH 4xxx
- MATH 5xxx
- STAT 3xxx
- STAT 4xxx
- STAT 5xxx
Duluth Campus
Mechanical Engineering B.S.M.E.
UMD Mechanical/Industrial Engineering
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 129
- Required credits within the major: 114
- Degree: Bachelor of Science in Mechanical Engineering

The mission of the bachelor of science in mechanical engineering is to deliver a laboratory-intensive, undergraduate mechanical engineering education that provides students with the tools and skills to excel in the engineering profession, as they pursue lifelong learning and make positive contributions to society. The student learning experience offers unique opportunities for study abroad, undergraduate research, and electives outside of mechanical engineering to develop an enhanced global perspective.

The educational objectives of the mechanical engineering program are to produce graduates who are able to:

1. Solve mechanical engineering problems by applying contemporary engineering tools to propose and implement effective solutions.
2. Design, develop, implement, and improve thermal and mechanical systems.
3. Contribute as informed, ethical, and responsible members of the engineering profession and society as a whole.
4. Continue lifelong professional development throughout their career.
5. Collaborate and communicate effectively with others as a member or leader of an engineering or multidisciplinary team in an international setting.

The BSME program integrates topics from chemistry, physics, advanced mathematics and statistics, and core engineering science to prepare graduates to work professionally in both thermal and mechanical systems, from design, development, manufacture, and use of products involving mechanical and thermal elements.

The program emphasizes the production engineering approach to mechanical and thermal systems design and development. Upper division courses provide students with a strong understanding of mechanical and thermal systems, and the skills to design, develop, and implement these systems.

The mechanical engineering program is accredited by the Engineering Accreditation Commission of ABET. http://www.abet.org

Mechanical engineering graduates are qualified for employment in a wide variety of industries including design, manufacturing, materials, aerospace, transportation, natural resources, and energy. Graduates may pursue assignments in design, development, manufacturing, operations, project engineering, or sales, and frequently move into engineering management. They are also well-qualified to continue with graduate education.

Students in the BSME program have the opportunity to put their design and entrepreneurial skills to use in ASME design competitions, projects sponsored by regional companies, and research projects in the Undergraduate Research Opportunities Program.

Honors requirements: To graduate with department honors, a student must have a 3.40 GPA, be an active member of Tau Beta Pi or a professional engineering society (ASME, ASSE, IIE, MSPE, SME or SWE), and be nominated by a department faculty member.

Program Delivery
This program is available:
  - via classroom (the majority of instruction is face-to-face)

Admission Requirements
Freshman and transfer students students are usually admitted to pre-major status before admission to this major

Freshmen, sophomores, and transfer students may declare a ME major and be admitted to lower division status. Admission to the upper division BSME program is competitive and based on performance in lower division courses and space availability. To be considered students must complete the MIE Application to upper division. The following requirements must be met:
1. Completion of the following courses or their transfer equivalents:
   - WRIT 1120
   - CS 1121 or 1411 or 1511 or 2121
   - ENGR 1222
   - CE 2017
   - ME 2105
   - MATH 3280

2. A minimum cumulative UMD GPA of 2.50. Admission is competitive and applicants are admitted on a space-available basis, with priority determined by cumulative UMD GPA.

For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the Liberal Education Program.

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A minor or second major is not required for BSME.

2. Students must submit applications to upper division BSME program and if accepted must remain in good academic standing. BSME upper division students placed on academic probation will also be removed from upper division BSME status and will not be readmitted to BSME upper division until they achieve good academic standing with the University.

3. Students must complete a minimum of 32 credits of math and science courses. The mechanical engineering curriculum uses the math and science required courses, listed below, to meet this requirement. Courses transferred from other institutions may transfer with fewer credits than the UMD equivalent(s). In this case, to reach the 32 credit minimum, additional coursework within the approved subjects of BIOL, CHEM, ESCI, GEOL, MATH, PHYS, and STAT at the 1xxx - 4xxx level, can be applied to satisfy this credit difference.

Math and Science Required Courses (36 cr)
Students who transfer courses with fewer credits than the UMD equivalent(s) must complete an additional approved math or science credits as noted above.

Chemistry I with lab

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 1153</td>
<td>General Chemistry I [LE CAT5, NAT SCI]</td>
<td>4.0 cr</td>
</tr>
<tr>
<td>CHEM 1154</td>
<td>General Chemistry Lab I [LE CAT4, NAT SCI]</td>
<td>1.0 cr</td>
</tr>
</tbody>
</table>

Mathematics and Statistics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 1296</td>
<td>Calculus I [LE CAT2, LOGIC &amp; QR]</td>
<td>5.0 cr</td>
</tr>
<tr>
<td>MATH 1297</td>
<td>Calculus II [LOGIC &amp; QR]</td>
<td>5.0 cr</td>
</tr>
<tr>
<td>MATH 3280</td>
<td>Differential Equations with Linear Algebra</td>
<td>4.0 cr</td>
</tr>
<tr>
<td>MATH 3298</td>
<td>Calculus III</td>
<td>4.0 cr</td>
</tr>
<tr>
<td>STAT 3411</td>
<td>Engineering Statistics</td>
<td>3.0 cr</td>
</tr>
</tbody>
</table>

Physics

Physics I course
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
*or* PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

**Physics I lab**
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

**Physics II course**
PHYS 2015 - General Physics II (4.0 cr)
*or* PHYS 2018 - Honors General Physics II (4.0 cr)

**Physics II lab**
PHYS 2016 - General Physics Lab II (1.0 cr)

**BSME Core Courses (60 cr)**
Courses include fundamental material in engineering management, engineering science, industrial engineering, and mechanical engineering. Concepts are delivered in lecture and reinforced in lab experiences.

**EE 2006** - Electrical Circuit Analysis (4.0 cr)
**ENGR 4110** - Engineering Professionalism and Practice (2.0 cr)
**ENGR 1210** - Introduction to Engineering (2.0 cr)
**ENGR 1222** - Introduction to Solid Modeling (2.0 cr)
**IE 3122** - Materials Engineering Laboratory (2.0 cr)
**IE 3125** - Engineering Economic Analysis [SOC SCI] (3.0 cr)
**IE 3130** - Materials Processing Engineering (3.0 cr)
**IE 4993** - Industrial Engineering Seminar (1.0 cr)
**ME 2105** - Introduction to Material Science for Engineers (3.0 cr)
**ME 2211** - Thermodynamics [SUSTAIN] (3.0 cr)
**ME 2226** - Dynamics (3.0 cr)
**ME 3140** - System Dynamics and Control (3.0 cr)
**ME 3222** - Controls and Kinematics Laboratory (2.0 cr)
**ME 3230** - Kinematics and Mechatronics (3.0 cr)
**ME 4112** - Heat and Mass Transfer (3.0 cr)
**ME 4122** - Heat Transfer, Thermodynamics and Fluid Mechanics Laboratory (2.0 cr)
**ME 4145** - CAD/CAM (4.0 cr)
**ME 4175** - Machine Design (3.0 cr)
**ME 4255** - Multidisciplinary Senior Design (4.0 cr)
**ME 3111** - Fluid Mechanics (3.0 cr)
*or* **CHE 3111** - Fluid Mechanics (3.0 cr)

**Mechanical Engineering Advanced Electives (3 cr)**
These courses help a mechanical engineer develop skills in a particular technical area.

Take 3 or more credit(s) from the following:
- **ME 4135** - Robotics and Controls (3.0 cr)
- **ME 4365** - Global Sustainability Experience in Design/Manufacturing in Africa (3.0 cr)
- **ME 4495** - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
- **ME 5305** - Computational Fluid Dynamics (3.0 cr)
- **ME 5315** - Nondestructive Evaluation of Engineering Materials (3.0 cr)
- **ME 5325** - Sustainable Energy System (3.0 cr)
- **ME 5335** - Introduction to Finite Element Analysis (3.0 cr)
- **ME 5345** - Smart Materials and Structures (3.0 cr)
- **ME 5355** - Gas Turbines (3.0 cr)

**Mechanical Engineering Technical Electives (6 cr)**
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
- **CHE 4301** - Chemical Reaction Engineering (3.0 cr)
- **CHE 5022** - Transport Processes in Wells and Pipelines (3.0 cr)
- **EE 2111** - Linear Systems and Signal Analysis (4.0 cr)
- **EE 3445** - Electromagnetic Fields (3.0 cr)
- **EE 4501** - Power Systems (4.0 cr)
- **EE 4611** - Introduction to Solid-State Semiconductors (3.0 cr)
- **IE 3115** - Operations Research (4.0 cr)
- **IE 4010** - Six Sigma Quality Control (3.0 cr)
- **IE 4020** - Lean Production Management (3.0 cr)
- **IE 4993** - Industrial Engineering Seminar (1.0 cr)
- **IE 5315** - Organizational Control Methods (3.0 cr)
- **IE 5325** - Advanced Engineering Economics (3.0 cr)
- **ME 3010** - Fundamentals of Machining and Manufacturing (3.0 cr)
- **ME 4050** - Fundamentals of Nuclear Engineering (3.0 cr)
• ME 4060 - Machine Vision and Image Based Robot Control (3.0 cr)
• ME 4135 - Robotics and Controls (3.0 cr)
• ME 4196 - Cooperative Education I (1.0 cr)
• ME 4197 - Mechanical Engineering Internship (1.0 cr)
• ME 4296 - Cooperative Education II (2.0 cr)
• ME 4297 - Mechanical Engineering Internship (2.0 cr)
• ME 4365 - Global Sustainability Experience in Design/Manufacturing in Africa (3.0 cr)
• ME 4375 - Pipeline Engineering (3.0 cr)
• ME 4491 - Independent Study in Mechanical Engineering (1.0 - 4.0 cr)
• ME 4495 - Special Topics: (Various Titles to be Assigned) (1.0 - 4.0 cr)
• ME 5305 - Computational Fluid Dynamics (3.0 cr)
• ME 5315 - Nondestructive Evaluation of Engineering Materials (3.0 cr)
• ME 5325 - Sustainable Energy System (3.0 cr)
• ME 5335 - Introduction to Finite Element Analysis (3.0 cr)
• ME 5345 - Smart Materials and Structures (3.0 cr)
• ME 5355 - Gas Turbines (3.0 cr)
• ME 5991 - Independent Study in Mechanical Engineering (1.0 - 4.0 cr)
• MGTS 4472 - Entrepreneurship (3.0 cr)
• PHYS 2021 - Relativity and Quantum Physics (4.0 cr)
• PHYS 4021 - Quantum Physics II (4.0 cr)
• PHYS 4031 - Thermal and Statistical Physics (4.0 cr)
• TH 3375 - Mechanical Design for Stage (3.0 cr)

Courses From Other Programs (9 cr)
These courses help engineers develop a foundation of communication, computer, and economics skills.

Computer Science
• CS 1121 - Introduction to Programming in Visual BASIC.NET [LE CAT3, LOGIC & QR] (3.0 cr)
• CS 1411 - Introduction to Programming in Matlab (4.0 cr)
• CS 2121 - Introduction to Programming in Java [LE CAT3, LOGIC & QR] (3.0 cr)
• CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
• CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)

Economics
• ECON 1022 - Principles of Economics: Macro [LE CAT6, SOC SCI] (3.0 cr)
• ECON 1023 - Principles of Economics: Micro [LE CAT6, SOC SCI] (3.0 cr)

Advanced Writing
• WRIT 3130 is preferred
• WRIT 3130 - Advanced Writing: Engineering (3.0 cr)
• WRIT 3150 - Advanced Writing: Science (3.0 cr)
• WRIT 3180 - Honors: Advanced Writing (3.0 cr)
**Duluth Campus**

**Natural History Minor**

*Swenson College of Science and Engineering*

- Program Type: Undergraduate free-standing minor
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 34

The natural history minor enhances student understanding of the ecology and geology of the natural world. It places particular emphasis on courses with field labs. The minor program covers a wide range of topics in earth's history, geomorphology, ecology, ornithology, entomology, ichthyology, mammalogy, animal behavior, and field interpretation for education, as well as other topics.

**Program Delivery**

This program is available:
- via classroom (the majority of instruction is face-to-face)

### Minor Requirements

**Required Courses (22 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1011</td>
<td>General Biology I [LE CAT4, NAT SCI]</td>
<td>5.0 cr</td>
</tr>
<tr>
<td>BIOL 1012</td>
<td>General Biology II [SUSTAIN]</td>
<td>5.0 cr</td>
</tr>
<tr>
<td>BIOL 2801</td>
<td>General Ecology</td>
<td>3.0 cr</td>
</tr>
<tr>
<td>GEOL 1110</td>
<td>Geology and Earth Systems [LE CAT4, NAT SCI, SUSTAIN]</td>
<td>4.0 cr</td>
</tr>
<tr>
<td>GEOL 2110</td>
<td>Earth History</td>
<td>4.0 cr</td>
</tr>
<tr>
<td>BIOL 4992</td>
<td>Senior Seminar: Classic Readings in Natural History</td>
<td>1.0 cr</td>
</tr>
</tbody>
</table>

**Required Electives (12 cr)**

Take 12 or more credit(s) from the following:

#### Biology

- Take 1 or more course(s) from the following:
  - BIOL 3601 - Plant Diversity (3.0 cr)
  - BIOL 3603 - Plant Taxonomy (3.0 cr)
  - BIOL 3701 - Animal Diversity (4.0 cr)
  - BIOL 3760 - Marine Biology (3.0 cr)
  - BIOL 3761 - Field Studies in Marine Biology (4.0 cr)
  - BIOL 3830 - Aquatic Food Webs (3.0 cr)
  - BIOL 3835 - Freshwater Ecology (3.0 cr)
  - BIOL 4731 - Entomology (3.0 cr)
  - BIOL 4761 - Ichthyology (3.0 cr)
  - BIOL 4763 - Ornithology (3.0 cr)
  - BIOL 4764 - Mammalogy (3.0 cr)
  - BIOL 4818 - Biotic Response to Climate Change (3.0 cr)
  - BIOL 4850 - Food and Humans (3.0 cr)
  - BIOL 4891 - Animal Behavior (2.0 cr)
  - BIOL 5515 - Microbial Diversity and Phylogeny (3.0 cr)
  - BIOL 5777 - Plankton Biology (2.0 cr)
  - BIOL 5801 - Microbial Ecology (2.0 cr)
  - BIOL 5802 - Inactive (2.0 cr)
  - BIOL 5805 - Fisheries Ecology and Management (3.0 cr)
  - BIOL 5833 - Stream Ecology (3.0 cr)
  - BIOL 4839 - Coral Reef Field Studies [GLOBAL PER] (3.0 cr)
  - BIOL 5861 - Lake Ecology (3.0 cr)
  - BIOL 5865 - Conservation Biology (2.0 cr)
  - BIOL 5870 - Wetland Ecology (3.0 cr)

#### Geology

- Take 1 or more course(s) from the following:
  - GEOL 3100 - Earth's Climate and Environment: Past and Future (3.0 cr)
  - GEOL 3210 - Geomorphology (4.0 cr)
  - GEOL 4500 - Field Geology (6.0 cr)
• **GEOL 5220** - Advances in Paleoclimatology (3.0 cr)
• **Additional Elective Options**
  Take 0 or more course(s) from the following:
  • **ENED 3341** - Field Interpretive Techniques I (3.0 cr)
  • **ENED 3342** - Field Interpretive Techniques II (3.0 cr)
  • **FST 3236** - Icelandic Geology & the New Society (3.0 cr)
Duluth Campus
Physics B.A.
UMD-Physics & Astronomy
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 55
- Degree: Bachelor of Arts

The bachelor of arts degree in physics is a liberal arts degree that allows considerable freedom in the planning of upper level courses and can easily be combined with other majors and interests. The physics courses emphasize conceptual foundations, problem-solving skills, and experimental techniques.

Honors requirements: To graduate with honors, students must participate in the department honors program, complete and present a research project, and maintain a GPA above 3.00 overall and in the major. They are also expected to attend department colloquia. Interested students should contact the physics honors program coordinator.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

Required prerequisites
Introductory Requirement (1 cr)
Transfer students with 24 or more credits and current students who change from a BS degree or change colleges may request to be waived from this requirement. New first-year students with 24 or more PSEO credits may request to be waived from this requirement.
UST 1000 - UMD Seminar (1.0 - 2.0 cr)

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A second field of study (either a minor or another major).
2. Students interested in teaching 9-12 physics may enroll concurrently in secondary licensure requirements in the Department of
Education and apply for admission to the Secondary Teacher Education Program.

3. Taking the "Honors" General Physics I course (PHYS 2017) is recommended but not required for physics majors.

**Required Courses (22 cr)**

**Physics I course**
- PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
  - or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

**Physics I lab**
- PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

**Physics II course**
- PHYS 2015 - General Physics II (4.0 cr)
  - or PHYS 2018 - Honors General Physics II (4.0 cr)

**Physics II lab**
- PHYS 2016 - General Physics Lab II (1.0 cr)

**Core Courses**
- PHYS 1021 - Exploring Current Topics in Physics (1.0 cr)
- PHYS 2021 - Relativity and Quantum Physics (4.0 cr)
- PHYS 2022 - Classical Physics (4.0 cr)
- PHYS 2033 - Classical and Quantum Physics Lab (2.0 cr)
- PHYS 5090 - Physics Seminar (1.0 cr)

**Electives (11 cr)**
Take 11 or more credit(s) from the following:
- AST 4110 - Observational Astronomy (3.0 cr)
- LIM 5101 - Physical Limnology (3.0 cr)
- PHYS 3033 - Analytical Methods in Physics (3.0 cr)
- PHYS 3061 - Instrumentation (3.0 cr)
- PHYS 4001 - Classical Mechanics (4.0 cr)
- PHYS 4011 - Electromagnetic Theory (4.0 cr)
- PHYS 4021 - Quantum Physics II (4.0 cr)
- PHYS 4031 - Thermal and Statistical Physics (4.0 cr)
- PHYS 5041 - Optics (3.0 cr)
- PHYS 5052 - Computational Methods in Physics (3.0 cr)
- PHYS 5053 - Data Analysis Methods in Physics (3.0 cr)
- PHYS 5061 - Experimental Methods (3.0 cr)
- PHYS 5063 - Theoretical Methods (3.0 cr)
- PHYS 5531 - Introduction to Solid State Physics (3.0 cr)
- PHYS 5541 - Fluid Dynamics (3.0 cr)
- PHYS 3561 - Astrophysics (3.0 cr)
  - or PHYS 5561 - Astrophysics (3.0 cr)

**Courses From Other Programs (21 cr)**

**Mathematics**
- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
- MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
- MATH 3298 - Calculus III (4.0 cr)

**Advanced Writing**
- WRIT 3130 - Advanced Writing: Engineering (3.0 cr)
  - or WRIT 3150 - Advanced Writing: Science (3.0 cr)
Duluth Campus
Physics B.S.
UMD-Physics & Astronomy
Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 65
- Degree: Bachelor of Science

The bachelor of science degree in physics is primarily for students planning to work toward an advanced degree in physics or a related area. The physics courses emphasize conceptual foundations, problem-solving skills, and experimental techniques.

Students are encouraged to participate in research. The department also offers courses required for other science and engineering programs.

Honors requirements: To graduate with honors, students must participate in the department honors program, complete and present a research project, and maintain a GPA above 3.00 overall and in the major. They are also expected to attend department colloquia. Interested students should contact the physics honors program coordinator.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
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General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A minor or a second major in a different program.
2. The first math course is determined by ACT math score. The sample plan presupposes placement into MATH 1296.
3. Courses numbered above 3xxx may be offered in alternate years only. Some courses suggested in the sample plans in the junior and senior years may need to be switched to match the course offerings.
4. Students interested in teaching 9-12 physics may enroll concurrently in the Department of Education and apply for admission to the Secondary Teacher Education Program.

5. Taking the Honors General Physics I course (PHYS 2017) is recommended but not required.

**Required Courses (35 cr)**

**Physics I course**
- PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
  or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)

**Physics I lab**
- PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

**Physics II course**
- PHYS 2015 - General Physics II (4.0 cr)
  or PHYS 2018 - Honors General Physics II (4.0 cr)

**Physics II lab**
- PHYS 2016 - General Physics Lab II (1.0 cr)

**Core Courses**
- PHYS 2021 - Relativity and Quantum Physics (4.0 cr)
- PHYS 2022 - Classical Physics (4.0 cr)
- PHYS 2033 - Classical and Quantum Physics Lab (2.0 cr)
- PHYS 3033 - Analytical Methods in Physics (3.0 cr)
- PHYS 4001 - Classical Mechanics (4.0 cr)
- PHYS 4011 - Electromagnetic Theory (4.0 cr)
- PHYS 4021 - Quantum Physics II (4.0 cr)

**Electives (9 cr)**
Take 9 or more credit(s) from the following:
- AST 4110 - Observational Astronomy (3.0 cr)
- PHYS 3061 - Instrumentation (3.0 cr)
- PHYS 3091 - Independent Study (1.0 - 3.0 cr)
- PHYS 3094 - Physics Research (1.0 - 6.0 cr)
- PHYS 3561 - Astrophysics (3.0 cr)
- PHYS 4031 - Thermal and Statistical Physics (4.0 cr)
- PHYS 5033 - Introduction to Particle Physics (3.0 cr)
- PHYS 5041 - Optics (3.0 cr)
- PHYS 5052 - Computational Methods in Physics (3.0 cr)
- PHYS 5053 - Data Analysis Methods in Physics (3.0 cr)
- PHYS 5061 - Experimental Methods (3.0 cr)
- PHYS 5063 - Theoretical Methods (3.0 cr)
- PHYS 5090 - Physics Seminar (1.0 cr)

**Required Courses From Other Programs (21 cr)**

**Mathematics**
- MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
- MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
- MATH 3298 - Calculus III (4.0 cr)

**Advanced Writing**
- WRIT 3130 - Advanced Writing: Engineering (3.0 cr)
  or WRIT 3150 - Advanced Writing: Science (3.0 cr)

**Recommended Courses From Other Programs**

**Chemistry**
- CHEM 1153 - General Chemistry I [LE CAT5, NAT SCI] (4.0 cr)
- CHEM 1154 - General Chemistry Lab I [LE CAT4, NAT SCI] (1.0 cr)

**Computer Science**
- CS 1411 - Introduction to Programming in Matlab (4.0 cr)
  or CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
  or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)

**Mathematics**
- MATH 3326 - Vectors and Matrices (3.0 cr)
- MATH 3810 - Applied Mathematics: Numerical Methods (4.0 cr)
Duluth Campus

Physics Minor
UMD-Physics & Astronomy
Swenson College of Science and Engineering

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 34

The physics minor provides an introduction to classical and quantum physics.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements

Physics Minor Courses (34 cr)

Math
MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Physics I
PHYS 2013 - General Physics I [LE CAT5, NAT SCI] (4.0 cr)
  or PHYS 2017 - Honors: General Physics I [NAT SCI] (4.0 cr)
PHYS 2014 - General Physics Lab I [NAT SCI] (1.0 cr)

Physics II
PHYS 2015 - General Physics II (4.0 cr)
  or PHYS 2018 - Honors General Physics II (4.0 cr)
PHYS 2016 - General Physics Lab II (1.0 cr)

General Physics
PHYS 1021 - Exploring Current Topics in Physics (1.0 cr)
PHYS 2021 - Relativity and Quantum Physics (4.0 cr)
PHYS 2022 - Classical Physics (4.0 cr)
PHYS 2033 - Classical and Quantum Physics Lab (2.0 cr)

PHYS 3xxx-5xxx
Take 3 or more credit(s) from the following:
- PHYS 3xxx
- PHYS 4xxx
- PHYS 5xxx
**Duluth Campus**

**Resilient Precast Concrete Certificate**

*UMD-Civil Engineering, Dept of Swenson College of Science and Engineering*

- Program Type: Undergraduate credit certificate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 16

The focus of the Resilient Precast Engineering Certificate (RPEC) program is two-pronged. Participants will attain the skill and understanding required to design precast concrete structures, and in the process, learn how to apply resiliency-based values to their decision-making. Throughout the process, the professional and communication skills of the participants will also be honed. Participants who have completed the five-course curriculum will graduate with a deeper knowledge related to the engineering, resiliency, and business aspects of precast concrete.

**Program Delivery**

This program is available:
- via classroom (the majority of instruction is face-to-face)

**Admission Requirements**

Students must complete 45 credits before admission to the program.

A GPA above 2.0 is preferred for the following:
- 2.50 already admitted to the degree-granting college
- 2.50 transferring from another University of Minnesota college
- 2.50 transferring from outside the University

For information about University of Minnesota admission requirements, visit the [Office of Admissions website](#).

**Required prerequisites**

**Pre-major Requirements** (3 cr)

CE 3115 - Structural Analysis (3.0 cr)

**General Requirements**

The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:

1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.

2. Students must complete all requirements of the [Liberal Education Program](#).

3. Students must complete a minimum of 120 semester credits.

4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.

5. Students must complete at least half of their courses at the 3xxx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.

6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.

7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.

8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

**Program Requirements**

**Requirements** (13 cr)

CE 4126 - Design of Concrete Structures (3.0 cr)
CE 4100 - Applications of Management in Resilient Precast Concrete (1.0 cr)
BUS 2400 - Fundamentals of Organizational Management (2.0 cr)
CE 4128 - Prestressed Concrete Structures (3.0 cr)
or CE 5128 - Prestressed Concrete Structures (3.0 cr)

**Senior Design**
CE 4255 - Senior Design (4.0 cr)
Duluth Campus

Statistics and Actuarial Science B.S.

Mathematics & Statistics

Swenson College of Science and Engineering

- Program Type: Baccalaureate
- Requirements for this program are current for Fall 2018
- Required credits to graduate with this degree: 120
- Required credits within the major: 56 to 57
- Degree: Bachelor of Science

The science of statistics is concerned with generating and analyzing data. Actuarial science applies statistical methods to assess risk in the insurance and financial industries. The statistics and actuarial science major prepares students for careers in a wide variety of fields, from banking and government to health care. Advisors have information on the national actuarial examinations.

Honors Requirements: To graduate with department honors, a student must complete the program with an overall and department GPA of 3.50, satisfactorily complete a research project under the guidance of a faculty member, and convey research results in a public presentation.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Admission Requirements
For information about University of Minnesota admission requirements, visit the Office of Admissions website.

General Requirements
The Board of Regents, on recommendation of the faculty, grants degrees from the University of Minnesota. Requirements for an undergraduate degree from University of Minnesota Duluth include the following:
1. Students must meet all course and credit requirements of the departments and colleges or schools in which they are enrolled including an advanced writing course. Students seeking two degrees must fulfill the requirements of both degrees. However, two degrees cannot be awarded for the same major.
2. Students must complete all requirements of the Liberal Education Program.
3. Students must complete a minimum of 120 semester credits.
4. At least 30 of the last 60 degree credits earned immediately before graduation must be awarded by UMD.
5. Students must complete at least half of their courses at the 3xx-level and higher at UMD. Study-abroad credits earned through courses taught by UM faculty and at institutions with which UMD has international exchange programs may be used to fulfill this requirement.
6. If a minor is required, students must take at least three upper division credits in their minor field from UMD.
7. The minimum cumulative UM GPA required for graduation will be 2.00 and will include only University of Minnesota coursework. A minimum UM GPA of 2.00 is required in each UMD undergraduate major and minor. No academic unit may impose higher grade point standards to graduate.
8. Diploma, transcripts, and certification will be withheld until all financial obligations to the University have been met.

Program Requirements
1. A minor in an area other than mathematics or a second major.

Introduction to Calculus Courses (10 cr)

Calculus I
Take one of the following Calculus I courses:
- MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)
- or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Calculus II
- MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)
Statistics and Actuarial Science Core Courses (42-43 cr)

Mathematics

MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)
MATH 3298 - Calculus III (4.0 cr)
MATH 3355 - Discrete Mathematics (4.0 cr)
MATH 4201 - Elementary Real Analysis (4.0 cr)
  or MATH 4326 - Linear Algebra (3.0 cr)

Statistics

STAT 3611 - Introduction to Probability and Statistics (4.0 cr)
STAT 3612 - Introduction to Probability and Statistics II (3.0 cr)
STAT 5511 - Regression Analysis (3.0 cr)
STAT 5531 - Probability Models (4.0 cr)
STAT 5571 - Probability (4.0 cr)
STAT 5572 - Statistical Inference (4.0 cr)

Computer Science

CS 1511 - Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)
  or CS 1581 - Honors: Computer Science I [LE CAT3, LOGIC & QR] (5.0 cr)

Required Math Undergraduate Colloquium (1 cr)

Students must register their last semester before graduation.
MATH 3941 - Undergraduate Colloquium (1.0 cr)

Advanced Writing Requirement (3 cr)

Advanced Writing - 31xx
Duluth Campus

Statistics Minor
Mathematics & Statistics
Swenson College of Science and Engineering

- Program Type: Undergraduate minor related to major
- Requirements for this program are current for Fall 2018
- Required credits in this minor: 21 to 27

The minor in statistics is based on the completion of traditional mathematics courses including Calculus and Linear Algebra, a required introductory statistics course, one advanced course in a traditional statistics area, and two additional, advanced elective statistics courses. The minor in statistics certifies a student's quantitative, problem-solving, and critical thinking skills.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Minor Requirements
1. This schedule presupposes placement into MATH 1296.

2. The Statistics minor is not allowed with a Mathematics major or with a Statistics major.

3. Students may not receive both a minor in Mathematics and a minor in Statistics.

Mathematics Requirement (8 - 9 cr)
Calculus I
MATH 1290 - Calculus for the Natural Sciences [LE CAT2, LOGIC & QR] (5.0 cr)

or MATH 1296 - Calculus I [LE CAT2, LOGIC & QR] (5.0 cr)

Additional Mathematics
Students choosing MATH 3280 will be required to complete the prerequisite course MATH 1297 Calculus II.
MATH 3280 - Differential Equations with Linear Algebra (4.0 cr)

or MATH 3326 - Vectors and Matrices (3.0 cr)

Optional Mathematics (5 cr)
Students choosing MATH 3280, STAT 3411, 3612, or 5511 will be required to complete the prerequisite course MATH 1297 Calculus II.
MATH 1297 - Calculus II [LOGIC & QR] (5.0 cr)

Statistics Requirements (6 - 7)
Intro Statistics
Students choosing STAT 3411 will be required to complete the prerequisite course MATH 1297 Calculus II.
STAT 3411 - Engineering Statistics (3.0 cr)

or STAT 3611 - Introduction to Probability and Statistics (4.0 cr)

Additional Statistics
Students choosing STAT 3612 or 5511 will be required to complete the prerequisite course MATH 1297 Calculus II.
STAT 3612 - Introduction to Probability and Statistics II (3.0 cr)

or STAT 5411 - Analysis of Variance (3.0 cr)

or STAT 5511 - Regression Analysis (3.0 cr)

Statistics Electives (6 cr)
Each elective course must be 3 credits or more. Neither STAT 3411 nor 3611 can be counted as Statistics Electives. Any of STAT 3612, 5411 and/or 5511, which are not counted in the Statistics Requirement category, may count towards the Statistics Electives.
Take 2 or more course(s) totaling 6 or more credit(s) from the following:
- STAT 3xxx
- STAT 4xxx
- STAT 5xxx