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The College of Continuing Education (CCE) provides high-quality continuing education and lifelong learning opportunities for professional development, personal enrichment, career transition, and academic growth. Established in 1913, CCE has one of the most comprehensive continuing education units in the country and serves as the University’s main access point for nontraditional students, particularly adult and part-time learners.

CCE offers a variety of degrees, certificates, and continuing professional education opportunities. With programs and services that cross the usual boundaries of time, place, mode of delivery, and academic discipline, CCE provides the knowledge and skills required in an information-based world and workplace. And, through CCE, non-admitted students can access University courses. Therefore, students interested in earning a degree can start taking courses to fulfill requirements before formally applying to their college of choice.

Admission

Admission to CCE Degree and Certificate Programs—All CCE degree programs have their own admission policies and procedures; for more specific information regarding admission to a particular degree program, please consult the relevant areas in this section describing each program, and contact the appropriate advising office. CCE degree programs admit at the upper division level only. For general questions about admission to CCE degree or certificate programs, contact CCE Student Support Services at 612-624-4000.

Liberal Education Requirements—Within CCE, the Inter-College Program (ICP) and the Program for Individualized Learning (PIL) follow the University’s standardized set of liberal education requirements. The Applied Partnership Degrees have liberal education requirements unique to each degree program. Please contact a student support service adviser for requirement information.

Degrees

Students have two broad options for earning baccalaureate degrees through CCE—individualized degrees or partnership degrees. For more information about these options, call 612-624-4000, or visit the CCE Web site at <www.cce.umn.edu>.

Individualized Degree Programs

Individualized degree programs open up educational opportunities for highly motivated students who need flexibility to earn their B.A. or B.S. degrees. Students develop degree programs tailored to their interests and talents.

CCE links the rich resources of the University’s faculty and staff with the individual undergraduate. Students, faculty, and staff work together to take responsibility for the integrity of each degree program and the maintenance of high academic standards. As a result, our graduates gain a strong sense of ownership of their education and confidence in how that education is related to their lives.

CCE’s individualized programs serve students by offering educational alternatives; the programs serve faculty by allowing them to develop and test innovative approaches to undergraduate education. Working together, the two groups help diversify learning experiences at the University.

Inter-College Program (ICP), founded in 1930, offers students a credit-based, individualized baccalaureate degree program drawing on the curricular offerings and other educational resources of the entire University community. This program provides an alternative to an already established major by giving students the flexibility to incorporate both day school and evening coursework from more than one college to achieve their educational goals. Call 612-624-2004 for more information and to arrange to attend a First Step meeting.

Program for Individualized Learning (PIL), founded in 1971, serves independent learners who wish to design and complete individualized study that incorporates a variety of learning resources and strategies, such as independent learning projects. PIL students work collaboratively with academic advisers and faculty throughout the University.

The program primarily serves students who live in the Twin Cities area, but will also consider qualified students who can commute to campus for some learning activities. The program also attempts to serve former University students who live outside the region. For more information, call 612-624-4020 to arrange to attend an information session. You can also e-mail pil@tc.umn.edu to find out more.

Bachelor of Applied Science (B.A.S.) Degrees

Students may also consider one of five majors within the B.A.S. degree offered in partnership with area community colleges and designed for career-minded adults: applied business, information networking, network administration, emergency health services, or construction management.

The B.A.S. with a major in applied business is an upper division, practitioner-oriented business program. Designed for adults who want education to enrich their lives and careers, the major allows students to develop skills and knowledge usable in their current work environments as they build toward a degree. The curriculum was developed after careful consultation with employers and provides the background education sought by employers when they make hiring and promotion decisions. Applied business instructors regularly bring private-sector work experience to their teaching, as well as a strong academic background.

Offered in partnership with six local Twin Cities community colleges, students can complete lower division pre-applied business courses in the evening at these convenient sites and at the University of Minnesota. Many pre-applied business courses can be taken from any location through distance education. An associate’s degree in business from an accredited community college or university usually meets most of the admission requirements.
The College of Continuing Education is the University of Minnesota’s major point of access and educational opportunity for the nontraditional, part-time, summer, and distance learner.

The upper division courses (listed with the “ABus” designator) in the applied business program provide a balance of solid theory and hands-on application of course concepts. The program revolves around a learning community of goal-oriented adult students who bring work experiences to the classroom. ABus courses are offered in the evenings and on Saturdays at convenient metropolitan sites, including community colleges and the University. Most courses in the program are available through distance education (beginning spring 2000).

For more information, call CCE Student Support Services at 612-624-4000 or e-mail bas@cce.umn.edu.

The B.A.S with a major in construction management is offered in close collaboration with the construction industry and in partnership with North Hennepin Community College in Brooklyn Park and Inver Hills Community College in Inver Grove Heights. Construction management combines building design and engineering with management and business skills to equip students with the skills needed to deliver projects on time and within budget. The major offers experience and education for a professional management career in the construction industry. For more information, contact CCE Student Support Services at 612-624-4000 or e-mail bas@cce.umn.edu.

The B.A.S. with a major in emergency health services is offered cooperatively with Inver Hills Community College in Inver Grove Heights and Regions Hospital in St. Paul. The program is designed to provide personnel working in pre-hospital medical care with the management, education, and skills necessary to coordinate and direct the delivery of emergency health services in a variety of settings, ranging from out-of-hospital, first-responder situations to occupational health and safety programs in large organizations. For more information, contact CCE Student Support Services at 612-624-4000 or e-mail bas@cce.umn.edu.

The B.A.S. with a major in information networking is offered in conjunction with North Hennepin Community College in Brooklyn Park. The University offers the upper division courses and awards the degree; North Hennepin offers lower division and prerequisite courses and is the site for most of the program courses.

This major is an interdisciplinary blend of computer science, management of information systems, liberal arts, science and engineering, and practical hands-on experience. Students will study the design and management of voice, video, and data transmissions over various networks and between different platforms. Graduates are prepared to assume a wide range of positions related to network design, engineering, and administration. For more information, call CCE Student Support Services at 612-624-4000 or e-mail bas@cce.umn.edu.

The B.A.S. with a major in network administration is designed to educate students in business and networking technology so they can function in both environments. Students learn to make business decisions with an understanding of their technical implications and technical decisions with an understanding of their business purposes and needs. The program enables students to develop both practical technical skills, useful in entry level positions, and a broad, high-level understanding of computer networking and business information systems. The B.A.S. in network administration is offered in partnership with Inver Hills Community College, Inver Grove Heights. For more information, call CCE Student Support Services at 612-624-4000 or e-mail bas@cce.umn.edu.

Other Degree Programs
Several other University of Minnesota degrees may be earned entirely or almost entirely through CCE registration in evening and Independent and Distance Learning courses. See separate college sections in this catalog for more information and specific program requirements.

Certificates
In addition to baccalaureate degrees, certificate programs offered through CCE provide an educational option for working adults. Certificates are short-term, focused college credentials that can supplement a student’s experience and previously earned degree, or serve as a stepping stone to a degree. Certificates provide concentrated coursework related to occupational areas or general background to prepare students for further college work.

Coursework may be completed with evening classes, Independent and Distance Learning, day classes, summer session classes, or any combination of these. For more information, call CCE Student Support Services at 612-624-4000 or e-mail adv@cce.umn.edu.

College of Continuing Education Certificates
Accounting
Alcohol and Drug Counseling Education
Business Administration
Cardiovascular Perfusion Technology
Child Abuse Prevention Studies
Civil Engineering
Computer Science
Electrical and Computer Engineering
Engineering and Science
Information Networking (pending approval)
Liberal Arts
Mechanical Engineering
Ophthalmology Technician
Organizational and Professional Communication
Orthoptics Study
Radiation Therapy
Scientific and Quantitative Methods

Honors
All CCE degree programs recognize outstanding academic achievement by offering an honors option for graduating students. Other collegiate units determine academic achievement criteria for their four-year degrees. See “Honors” in individual college sections of this catalog and contact the specific program for more information on honors options.

Graduation Requirements
A minimum of 120 credits acceptable to the college are required for all CCE bachelor degrees. A minimum of 30 University credits must apply to the degree and students must maintain a minimum GPA of 2.00. See ICP and PIL in the degree programs section for detailed graduation requirements.
Advising

CCE Student Support Services—The CCE Student Support Services office offers academic advising and financial aid advising free of charge to all students interested in CCE, its degrees, and certificates. Advisers can help students select programs of study, determine prerequisites, interpret degree requirements, discuss transcripts of previous college work, and choose courses.

Students seeking a college degree through registration in CCE classes should consult an adviser early in their planning. For more information, contact CCE Student Support Services at 612-624-4000 or e-mail adv@cce.umn.edu.

Special Learning Opportunities and Resources

Independent and Distance Learning (IDL) provides a wide array of University courses using mail and electronic technologies to meet the needs of adult and part-time students who cannot or choose not to attend classes on a university campus. Using textbooks and a study guide, combined with self-motivation and written feedback from a University instructor, students can earn college credits from home.

Nearly all IDL courses are available by correspondence through the U.S. mail. A growing number of courses provide the option of electronic-mail lesson exchange. More courses are being offered on the Internet, where students submit assignments and interact with an instructor and other students online. Many other courses include audio tapes, videotapes, and computer disks. There is no admission requirement to register for IDL courses. Most courses are self-paced, allow up to nine months to complete the coursework, and allow year-round registration.

Students may register by fax, mail, or in person. Credits earned through IDL coursework are recorded on a regular transcript and can be applied toward liberal education and/or major program requirements in most University undergraduate programs and all CCE certificate or degree programs. IDL courses can also satisfy residency requirements, with approval from colleges.

For information on courses, policies, and registration, request an Independent and Distance Learning Catalog by e-mail at catalog@cce.umn.edu or by calling 612-624-4000 or 1-800-234-6564. Information is also available at indstudy@tc.umn.edu or visit the online catalog, which contains an up-to-date and complete listing of courses, at <www.cce.umn.edu>.

Independent Study (UC 3075)—CCE allows undergraduates, regardless of college affiliation, to pursue projects beyond the scope of a single department or college. Projects are interdisciplinary or are completed in departments that do not offer an appropriate independent study course. Students may take 3–5 credits of UC 3075—Independent Study. For more information, contact ICP at 612-624-2004.

Scholarships

The College of Continuing Education Student Support Services administers the Tuition Assistance Grant Program and eight scholarship programs for CCE students, provides information to CCE students about other financial aid options, and collaborates with the University’s Office of Scholarships and Financial Aid to deliver aid to students enrolled in Independent and Distance Learning term-based correspondence courses.

CCE grant and scholarship programs are designed for students who reside in Minnesota, who have had to delay or interrupt their education, and have financial need but are unserved or underserved by other grant, scholarship, or tuition reimbursement programs. Priority is given to part-time students. In addition to financial need, scholarships are awarded on the basis of academic ability and a statement of personal, educational, and career goals. They are supported by donations from CCE alumni and friends. For more information, contact CCE Student Support Services at 612-624-4000 or e-mail adv@cce.umn.edu.
Student Organizations

The College of Continuing Education Student Board provides a forum for CCE students, faculty, and administration to exchange ideas and information. The board is composed of CCE students, the Dean of the College of Continuing Education or a designated representative, and two faculty or CCE staff members. All students are encouraged to communicate ideas, suggestions, and concerns to the CCE Student Board by calling 612-626-8501 to leave a voice-mail message for referral to a board member.

Eligibility for board membership—Students interested in election to the board must have earned at least 12 CCE credits in the last five years and must be enrolled for a minimum of 3 CCE semester or special-term credits. Interested students should call 612-626-8501 to notify the board of their wish to join; those interested must then attend two regular board meetings within a 12-month period. At the third regular board meeting attended, the student is eligible to be appointed to the board.

Terms for student members of the CCE Student Board run for one year, beginning on May 15 and ending on the following May 15.

Directory

(area code 612)

CCE Student Support Services
150 Westbrook Hall
77 Pleasant Street SE
Minneapolis, MN 55455
624-4000
Fax: 625-1511
E-mail: adv@cce.umn.edu
<www.cce.umn.edu>

Administrative Offices
Office of the Dean
201 Coffey Hall
St. Paul, MN 55108
624-5332
Gail Skinner-West, interim dean, 624-1751

Administrative Units
Academic Programs
624-8831
College in the Schools
626-0214
Compleat Scholar
625-7777
Continuing Professional Education
625-3100
Master of Liberal Studies
626-8724
Applied Degree Programs
626-8348
Personal Enrichment Programs
625-7777

Departments and Programs
Bachelor of Applied Science (BAS)
• Applied Business
• Business Construction Management
• Information Networking
• Network Administration
• Emergency Health Services

Inter-College Program (ICP)
107 Armory Building
Minneapolis, MN 55455
624-2004
Josh Borowicz, interim program director, 624-2004

Program For Individualized Learning (PIL)
107 Armory Building
Minneapolis, MN 55455
624-4020
Mary Sue Simmons, interim program director, 624-8879
E-mail: pil@tc.umn.edu
<www.pil.umn.edu/>

Organizations
College of Continuing Education Student Board
626-8501
Inter-College Program (ICP)

Founded in 1930, the Inter-College Program (ICP) embodies the University of Minnesota’s commitment to individualized undergraduate education by providing cross-college, course/credit-based degree options. Drawing upon the curricular offerings of most of the University’s colleges and departments, students design either a bachelor of arts (B.A.) or a bachelor of science (B.S.) degree incorporating a significant amount of coursework from at least two different colleges within the University system.

ICP is most appropriate for self-directed students whose educational backgrounds, and career and intellectual interests require both a clear personal focus and a flexible interdisciplinary approach.

ICP Degree Program Design

An ICP degree program may be structured in one of the following ways:

• A two area cross-college program, such as business and history (through the Carlson School of Management and CLA), or educational psychology and French (through the College of Education and Human Development and CLA).

  Students seeking a B.A. degree must complete 20 upper division credits in each of the two areas. Students pursuing a B.S. degree must complete 21 upper division credits in each area and 8 supporting upper division credits.

• A three area cross-college program, such as applied business, speech communication, and psychology (through CCE and CLA); or housing, child psychology, and public health (through the College of Human Ecology, CLA, and School of Public Health).

  B.A. students must complete 20 upper division credits in one area and 12 in each of the other two areas. B.S. students must complete 21 upper division credits in one area and 15 in each of the other two.

• A thematic cross-college program, such as “Aging Studies,” that integrates coursework from several departments—sociology (CLA), public health (School of Public Health), family education (College of Education and Human Development), and social work (College of Human Ecology). Thematic programs are appropriate only when students’ objectives are clearly focused on one topic that cannot be pursued in a two- or three-area program.

  B.A. students must complete 40 upper division credits. B.S. students must complete 50 upper division credits, with no more than 15 credits in any one department. B.A. students must complete ICP’s second-language requirement.

Special Learning Resources

ICP students may blend a variety of learning experiences—internships, foreign study, directed study or research—with their formal coursework; however, these are generally arranged as credit-bearing experiences.

Admission Process

Admission to ICP has both procedural and academic components. Once students have met the academic requirements, they can be admitted at various points in the degree-planning process. All students begin this process with a First Step meeting and should complete degree planning within a semester. Timely admission to the program requires close communication with an ICP adviser.

A. First Step Meetings

Several times each week, ICP holds small-group informational sessions called First Step meetings. Academic advisers provide a detailed introduction to the program and help students begin the planning process. Students are advised to attend a First Step meeting early in the process.

To schedule an appointment for a First Step meeting, call 612-624-2004 or visit the ICP office at 107 Armory, 15 Church Street S.E., Minneapolis, MN 55455.

B. Admission Requirements

Admission into ICP requires:

• An overall GPA of 2.00; a 2.00 GPA in upper division coursework; and a 2.00 GPA in each proposed area of concentration.

• Completion of 50 credits of college-level learning.

• Completion of at least 9 credits from the University of Minnesota.

• Completion of at least two upper division courses, preferably in proposed areas of concentration.

• Completion of designated prerequisites and meeting GPA requirements for specific areas of concentration, such as those offered by the Carlson School of Management (complete lists are available at First Step meetings).

• Development of a degree plan that includes:
  1) A description of academic and career goals.
  2) An outline of courses proposed for the degree program (degree plans may not parallel or duplicate existing degree programs at the University).

• Approval of the proposed degree plan from at least two designated faculty or departmental advisers.

Developing a Degree Proposal and Plan

A. Meetings with Academic Advisers

After attending a First Step meeting, students work individually with an ICP academic adviser to develop a degree proposal. This proposal will include a comprehensive statement of academic and career goals and a corresponding list of courses and other activities that students expect to complete in the degree program. Through meetings with an academic adviser, students refine their proposals and identify the best courses and special learning resources to achieve educational goals.

B. Preparing a Statement of Academic and Career Goals

The first task in developing a degree plan is preparing a statement of personal educational goals and objectives. While the statement need not be lengthy, it must clearly describe what students want to learn and why. The
document will identify the specific skills, information, or knowledge that students hope to acquire and their reasons for wanting them. It should also describe long-range goals, including plans for a specific career or academic study beyond the baccalaureate degree.

C. Preparing a Course List
The second part of the degree plan is the course list, which includes the learning experiences proposed for the degree program. Students must develop a list of all the courses and other learning experiences planned for the ICP degree program, including any appropriate courses that have already been completed.

D. Meetings with Faculty Advisers
At the end of the degree planning process, students meet with faculty and/or academic professional advisers in their proposed area of study for departmental review, input, and approval of the degree program. If necessary, students may be referred to faculty/department advisers earlier in the process. All changes to areas of concentration must be approved by these departmental advisers.

Completing an ICP Degree
After admission to ICP, students may take day, evening, or correspondence courses.

Faculty advisers will offer guidance throughout the program. If necessary, they can help revise the degree plan as students move through the program and may help design and complete independent studies and research.

ICP’s academic advisers can also assist throughout the degree program by answering questions about program revisions, independent study, honors options, and completion of graduation requirements.

Financial Aid—Many forms of financial assistance are available to all University students, including grants, loans, scholarships, or work-study. For information on all sources of financial aid and to obtain the application packet, contact the Office of Scholarships and Financial Aid, 210 Fraser Hall, 106 Pleasant Street S.E., Minneapolis, MN 55455 (612-625-1665). Students who are employed should investigate their companies’ tuition reimbursement programs; contact the personnel or human resource development office for more information.

Career and Placement Services—Early planning is important to prepare for a specific career or for admission to graduate or professional schools. ICP academic advisers will refer students to career development and placement services on campus and help in planning for graduate or professional education.

Liberal Education
A foundation in liberal education is required to provide breadth to learning and to integrate different academic disciplines and methods of inquiry into the process. ICP students must complete the Twin Cities liberal education requirements. Students admitted to the University before fall 1994 must fulfill an earlier set of ICP liberal education requirements, available from the ICP office.

ICP students must also complete one lower division and one upper division composition course or two writing intensive courses at the upper division level, and one course in oral communication. B.A. students must also complete two years of college study (or equivalent) in a second language.

Graduation Requirements
To earn the ICP degree, students must satisfy the following graduation requirements:

• Complete the courses and other learning activities selected for the ICP degree program.
• Complete liberal education requirements for the B.A. or B.S.
• Complete 120 credits, including transfer and extension courses.
• Complete 50 upper division credits for the B.A. or B.S.
• Complete 30 University of Minnesota credits that apply to the degree.
• Complete a residency requirement of at least one semester.
• Maintain at least a 2.00 GPA overall, in upper division work and in degree program work, computed separately.
Program for Individualized Learning (PIL)

PIL allows students to use their creativity and academic skills to shape their undergraduate college education. By designing and implementing their own degree programs, students embark on one of the most stimulating and challenging experiences of their educational careers.

The program blends tradition and innovation, allowing students to combine the best of traditional practices and resources with new concepts and strategies for defining curriculum, learning independently, and evaluating learning. The program strives to recognize the knowledge and experience that distinguishes adult students and allows them more control over the content, structure, and pace of learning.

The length of time or cost required to complete a PIL degree program is difficult to predict. It usually requires about as much time as a traditional program, but can offer greater flexibility and control of students’ time.

The program began in 1971 as one of the original University Without Walls programs founded through cooperative efforts at institutions around the country. The program was based on the belief that people learn in many different ways, at different times and places in their lives, and that they should be actively involved in their own learning.

PIL is headquartered on the University’s Minneapolis campus, but students may work with faculty on any of the University campuses.

Criterion-Based Education

This program challenges students to think about learning in new ways. A set of standards, called graduation criteria, describes the basic academic structure of the bachelor’s degree. These criteria, rather than number of credits, provide the framework for structuring the degree program and assessing its success.

Students use the graduation criteria to build their own degree programs. Students are encouraged to be creative and to use a variety of learning activities (courses and projects) to satisfy each criterion. Courses that have already been completed may be used to fulfill the graduation criteria; students can also demonstrate college-level learning achieved through work, experience, and independent study. New learning activities may explore untapped interests or build on prior learning. These activities may include independent projects, internships, work-based projects, and classroom and correspondence coursework.

Graduation Criteria for the B.A. and B.S. Degrees

A PIL degree requires achievement and excellence equal to other baccalaureate programs at the University of Minnesota. The graduation criteria require in-depth knowledge in an area of concentration (depth criteria) and broad learning in the liberal arts (breadth criteria). Regardless of the area of concentration, the B.S. emphasizes the student’s field of study, while the B.A. emphasizes broader learning in the breadth criteria.

I. Depth Criteria: Area of Concentration

The program serves students who want to develop an area of concentration with some or all of the following attributes:

- Focused on interdisciplinary or multidisciplinary studies, or a specialized study within a broader academic context.
- Built on the academic strengths of the University.

- Designed as a foundation for graduate or professional education.
- Not readily available as a structured undergraduate degree program.

The area of concentration, traditionally called a “major,” should reflect balance, depth, and quality in a field of study. The student’s area of concentration must fulfill the following three depth criteria: A) primary area studies, B) major project, and C) extended studies in the area of concentration.

Criterion A: Primary Area Studies (B.A. and B.S.)—Through learning activities in their primary area studies, students will acquire familiarity with the basic literature and vocabulary of their field, knowledge of its main theories and methods of investigation, ability to use the skills of the field, and an awareness of its relationship to contemporary and future society.

Criterion B: Major Project (B.A. and B.S.)—As a culmination of study in their area of concentration, students will complete a major project that reflects substantive understanding of their field of study.

Criterion C: Extended Studies in the Area of Concentration (B.S. only)—Students will complete learning activities that bring a broader perspective to their area of concentration. These studies will add knowledge that complements and expands on the primary area studies.

Areas of concentration of some recent students include: children’s mental health, community development and education, conservation biology, early and Celtic Christianity, environmental communication, family systems in the health sciences, international business with emphasis on Russia, organizational training, development, and communication, preservation of historic architecture, zoology and zoo management.

II. Breadth Criteria: Liberal Education Requirements

Learning in the liberal arts will comprise a substantial portion of the individualized degree program. The goal of liberal education is to help students explore new ideas, concepts, and ways of viewing the world.

All PIL students will include study in the broad areas that typify a liberal education. Whether seeking a B.A. or B.S., all students must complete learning for criteria 1–6; at least three of these criteria should incorporate upper division learning. In addition, students seeking a B.A. must complete requirements for Criterion 7.

Criterion 1: Physical and Biological Sciences—Studies will involve comprehension of physical and biological principles; understanding of and an ability to use the methods of scientific inquiry—the ways in which scientists investigate physical and biological phenomena; and appreciation of the importance of science and the value of a scientific perspective.

Criterion 2: Social Sciences and Humanities—Studies will involve knowledge of how social scientists describe and analyze human experiences and behavior; study of the interrelationships among individuals, institutions, structures, events, and ideas. These studies will involve understanding approaches to the human condition through works of art, literature, and philosophy; knowledge of how artists create and humanistic scholars think; and the ability to make aesthetic judgments.

Criterion 3: Historical Perspective—Studies will involve historical perspective through understanding the roles of individuals and groups in their historical, cultural, social, economic, and political worlds.
Criterion 4: Mathematical Thinking—These studies will involve acquiring mathematical modes of thinking; ability to evaluate arguments, detect fallacious reasoning, and evaluate complex reasoning chains; and appreciation of the breadth of applications of mathematics and its foundations.

Criterion 5: Communication—These studies will involve examining communication theory and skills (excluding written communication in English). Learning may focus on developing second-language skills or developing and refining knowledge and abilities in areas such as small group communication, public speaking and presentation, organizational communication, visual communication, and mass communication.

Criterion 6: Understanding of Place—These studies will involve an understanding of the student’s place in the world by examining relationships among nations, peoples, and cultures. This criterion specifically calls for students to make connections between a variety of perspectives, including historical, geographical, social, economic, artistic, cultural, and religious factors.

For B.A. programs:

Criterion 7: Extended Studies in the Liberal Arts—These studies will involve acquiring in-depth and advanced understanding of a focused liberal arts area; an interdisciplinary approach may also be proposed. Learning should include critical and theoretical understanding and upper division knowledge.

The University’s liberal education requirements are integrated into PIL through its breadth criteria, learning matrix, and reading and writing criteria. Because PIL is not credit-based, the precise amount of learning needed to address these three criteria are developed on an individual basis. If students are transferring into PIL from another college at the University, students will be able to use any previously accepted liberal education learning as part of their PIL requirement.

III. Learning Matrix

To broaden perspectives on liberal learning, degree programs must also examine a set of liberal education themes. Each theme focuses on an issue of compelling importance to the nation and the world, the understanding of which is informed by many disciplines and interdisciplinary fields of knowledge. While planning learning activities for the breadth criteria, and in some cases the depth criteria, students must ensure that their degree program incorporates the following themes from the learning matrix:

I. Cultural Diversity
II. International Perspectives
III. Environment
IV. Citizenship and Public Ethics
V. Creation of Meaning

IV. Reading and Writing Criteria

The ability to communicate effectively is a hallmark of a liberally educated individual and key to a successful and satisfying life. The program will include knowledge and skill in writing across the curriculum; students must develop their abilities in written communication from admission to graduation. Finally, the completed degree program will include at least four writing-intensive learning experiences.

Reading is a critical component of the area of concentration as students must expose themselves to a broad range of texts and journals of the field. While carrying out learning for the breadth criteria and learning matrix, students will read across many disciplines. As part of the PIL program, students will also be expected to include the study of literature (poetry, short stories, novels, and dramatic literature) as part of learning for Criterion 2. Study of literature allows students to build skill and knowledge in writing and reading.

A Four-Stage Program

Students, advisers, staff, and faculty work together to create an atmosphere of challenge and support to help students meet the special demands of each stage of the program. Procedures for completing various stages of the degree and meeting PIL registration and tuition requirements are outlined below.

Specific registrations depend on the stage students are in and the learning activities they are pursuing. All registrations described below are required of PIL students. Note that CCE credits are attached to all registrations in the program.

I. Admissions Stage

In the admissions stage, students meet with the program’s admissions committee to determine whether the student’s goals and PIL’s approach to individualized learning are a good match.

Students can learn more through information meetings and, later, individual appointments. To arrange to attend an information meeting (early evening sessions are available), call the PIL office at 612-624-4020.
To be considered for admission, students must submit an application (available at information meetings or from our office) that documents their ability to undertake a self-directed, individualized degree program. Students should have completed at least 30 college credits to be considered for admission. The program seeks students who:

- Know why they are seeking a bachelor’s degree and why PIL is a sound choice for them.
- Can describe their proposed academic area of study.
- Write well in English.

If the application for admission is accepted, PIL will work with students to identify a University of Minnesota faculty member with expertise in the area of completing new independent projects. Once an area specialist is identified, during the degree planning stage, the area specialist will help students develop an area of concentration and select appropriate learning activities. The area specialist will also help the student plan and execute the major project and will help in assessing readiness to graduate.

II. Degree Planning Stage

The first PIL registration is the Degree Planning Seminar; an evening class offered each semester that guides new students through the process of designing a degree plan.

UC 3211. Degree Planning Seminar—(8 credits)

During this class, students design a degree plan—a detailed outline of all completed and future learning activities (courses and projects) they plan to apply to the graduation criteria.

The degree plan must include a clear description of the area of concentration and learning activities (courses and projects) relevant to the study area. Students will learn or review the foundations of a liberal arts education, select appropriate activities, and learn how to design independent projects based on prior or new learning. The degree plan must also identify how students intend to fulfill the learning matrix and the reading and writing criteria.

Once the degree plan is approved, it serves as an agreement between the student and PIL, and functions as a blueprint for the implementation of the bachelor’s degree program. Students may decide to make changes in the plan by consulting with program advisers.

III. Program Implementation Stage

Upon approval of the degree plan, students are ready to carry out learning activities. These may include completing new independent projects, taking classes through the University or other institutions, or seeking evaluations for projects based on prior knowledge.

Students will register in the program for the following types of activities:

UC 3251. Individualized Study—(4 credits)

Individualized study involves developing, implementing, and having independent projects evaluated, based on either new or prior learning. Students register for UC 3251 when doing independent work. Students must attend the Individualized Study Seminar, which meets several times during the semester. Students draw up a contract that identifies the activities they plan to complete during the semester.

UC 3281. Major Project—(8 credits)

The major project, usually the final learning activity of the program implementation stage, demonstrates expertise gained in the area of concentration. Students register for the major project at the end of the program implementation stage. The major project is completed on an independent basis in consultation with advisers, who will assist in areas such as project design, research strategy, and writing.

In addition to these registrations, students may also include a number of new courses in their degree plans.

New Courses—New courses selected for the degree program may be taken through the University of Minnesota, including Independent and Distance Learning courses. Students may also choose to take courses from other accredited colleges and universities in the United States or abroad. Other credit-based learning activities may be used in the degree program.

Any University of Minnesota courses included in the program will require separate registration and tuition. Tuition and fees for other credit-based learning activities will vary. Students who complete coursework at other institutions must pay the tuition rates of those institutions.

IV. Graduation Stage

After students complete the coursework detailed in the degree plan, attaining the PIL bachelor’s degree requires the additional step of completing an extensive record of their undergraduate education, known as the graduation dossier. The dossier is then submitted to a graduation review committee.

UC 3291. Graduation Preparation—(8 credits)

During the time students register for graduation preparation, they will finish their graduation dossiers, demonstrating completion of requirements for a bachelor’s degree. The dossier will include an introductory essay demonstrating readiness to graduate, the major project, University of Minnesota transcript, PIL narrative transcript (written evaluations of independent learning), examples of academic work, and degree plan. The area specialist and program staff will provide a preliminary review of the dossier to ensure that graduation criteria have been met.

UC 4299. Graduation Review—(4 credits)

The final PIL registration is for graduation review, which is required after passing preliminary review. Students submit the final version of the dossier for assessment by a graduation review committee, which will vote on a recommendation to award the baccalaureate degree.

UC 3200. Continuing Studies—(1 credit)

Students may register for this course if they are working with an adviser on an incomplete PIL registration, or have no other registrations but are conducting independent research.

Special Information

Use of PIL Credits

The PIL program is not credit-based, but it uses credits to ensure that registrations are recognized within the University system and that students qualify for residency and financial aid requirements. Tuition credits attached to registrations are not the same as conventional coursework credits, i.e., they are not used to measure progress in the program or readiness to graduate, nor are they necessarily transferable to other programs or colleges.

Residency Requirements

PIL students fulfill the University’s residency requirement through program registrations, not necessarily through physical presence on campus. Regardless of where they live, all students are expected to make regular campus visits during their programs. Students will be expected to attend seminars and establish a pattern of regular visits with advisers on campus. Those few students admitted who live beyond commuting distance will make two or three visits to campus each year. The timing and length of campus visits are negotiable.
Bachelor of Applied Science Degrees
in Partnership With Area Community Colleges

Applied Business

B.A.S.
This practitioner-oriented degree is designed for adult and part-time students. Courses address real-world business issues and relate workplace skills to student experience. Degree requirements reflect a practical orientation, and courses are designed and scheduled primarily in the evening for working adults.

Students who have completed an A.S. degree in business at an accredited school can pursue a more advanced applied business degree at the University. Applied business courses are offered at campuses of area community colleges and the University; community colleges offer courses that may fulfill all lower division admission requirements. Lower division courses may also be completed through registration in evening or Independent and Distance Learning (correspondence) courses.

Admission Requirements—Students must complete the following requirements:
- Lower division coursework totaling 50-63 semester credits in the areas of economics, communications, mathematics, statistics, accounting, marketing, human relations, computer science, and other general education courses. Lists of eligible courses are available from B.A.S. academic advisers. Coursework may be completed at the University of Minnesota or through curricula for an A.S. degree in business from an accredited school.
- Minimum GPA of 2.20.
- Three years of work experience.

Degree Requirements
Students must complete at least 120 credits, including at least 57 credits in the major. Applied business students are admitted as advanced-standing students.

Required Courses
Students must complete 45 credits in the following courses:
- *ABus 4011—Historical Perspectives and Contemporary Business Challenges
- *ABus 4012—Problem Solving in Complex Organizations
- *ABus 4021—Small Group Behavior and Teamwork
- *ABus 4022—Managing Organizational Relationships
- *ABus 4023—Communicating for Results
- *ABus 4031—Accessing and Using Information Effectively
- *ABus 4032—Quantitative Skills for Decision Making
- *ABus 4041—Leadership in a Global and Diverse Workplace
- *ABus 4042—Planning and Implementation at the Business Unit Level
- *ABus 4043—Project Management in Practice
- *ABus 4101—Accounting and Finance for Managers
- *ABus 4102—Operations in Manufacturing and Service Businesses
- *ABus 4103—Marketing and Sales
- *ABus 4104—Management and Human Resource Practices
- *ABus 4999—Practicum

Students must also complete 12 additional credits (four upper division courses at 3 credits each). Lists of eligible courses are available from B.A.S. academic advisers.

Final Project
*ABus 4999—Practicum is required in the term preceding graduation.

* Check for online availability.

Construction Management

B.A.S.
This practitioner-oriented degree can enhance a student’s professional career in the construction industry by combining structure design and engineering concepts with management and business skills. The degree concentrates on key competencies of science/technology, management, and communication.

Courses in construction management have been created specifically for the degree. In addition, the program draws on the expertise and coursework in architecture, civil engineering, and other University departments. The construction management program has been designed to equip construction managers with the necessary skills to deliver projects on time, safely, and within budget. The Construction Management Advisory Board, consisting of representatives from the construction industry, and faculty and staff from the University and area community colleges, has developed the curriculum and reviewed the program’s requirements.

Admission Requirements—To be admitted to the program, students must have completed 45 credits with a cumulative overall GPA of 2.50 or higher. Admission requirements include:
- One semester of calculus—completed or in progress.
- One semester of physics—completed or in progress.
- One course in “building plan reading” or equivalent.

Remaining credits of the 45-credit total may be earned through coursework for an A.S. in construction management at a community college or through related coursework approved by the B.A.S. Admissions Committee at the University of Minnesota.

In addition, students must also complete 18 lower division credits during their academic program. These credits may be completed through coursework approved by a B.A.S. adviser or through curriculum for the A.S. in Construction Management at a community college.

Degree Requirements
Students must complete at least 120 credits, including at least 58 credits in the major.

The interdisciplinary curriculum of the construction management program includes:
- Strong foundation in the mathematics and sciences necessary to work effectively with the design, technological, and engineering aspects of construction projects.
- Specific construction management techniques.
- Elements that comprise construction, design, and problem solving.
- Thorough understanding of construction technology and processes.
- Strong business and management skills for business operations.
- Effective communication and interpersonal skills.
**Emergency Health Services**

**B.A.S.**

This degree is designed to prepare workers to meet the changing needs of emergency health services. The program will equip students with the education and skills needed to coordinate and direct the delivery of emergency health services in a variety of settings, ranging from out-of-hospital, in-hospital education and leadership, to occupational health and safety units in business and government. This is a partnership degree program from the University of Minnesota and Twin Cities community colleges through the Twin Cities Higher Education Partnership.

**Admission Requirements**—To be admitted to the program, a candidate must be a current registered nurse currently employed in an emergency medical setting or an EMT-paramedic with current state certification. Students must also have completed at least 30 semester (or 45 quarter) credits transferable to the program, including biology or chemistry, anatomy, physiology, English composition, and speech with a minimum GPA of 2.50. Contact a B.A.S. adviser for more information.

**Degree Requirements**

Students must complete at least 120 credits, including at least 55 credits in the major.

The program’s upper division segment requires a core set of courses in the areas of finance and budgeting; leadership and ethics; communication and interpersonal effectiveness; and research. Students must also complete a management or education track; both tracks include a practicum and elective courses.

**Required Courses**

Complete at least 27 credits of courses from the following:

- ABus 4023—Communicating for Results
- *ABus 4031—Accessing and Using Information Effectively
- EHS 4011—Concepts of Emergency Health Services
- EHS 4021—EMS Planning and Fiscal Management
- EHS 5031—Basic Principles of Research
- Phil 3305—Medical Ethics
- PubH 5170—Theory and Practice of Occupational Health
- PubH 5663—Cross-Cultural Health Issues

Choose one course from:

- *ABus 4021, EPsy 5152, HRD 5302, PA 5131

In addition, students must choose a management track or education track of study.

**Management Track**

Complete at least 25 credits from the following:

- *ABus 4011—Accounting and Finance for Managers
- *ABus 4041—Management and Human Resources Practicum
- *ABus 4012—Problem Solving in Complex Organizations
- OMS 3059—Quality Management
- *ABus 4022—Managing Organizational Relationships
- Mgmt 3001—Fundamentals of Management
- PubH 5771—Health Care Financial Management

Practicum in the management track

Choose 3 or more credits of elective courses in consultation with a B.A.S. adviser.

* Check for online availability.

**Education Track**

Complete at least 25 credits in the following courses:

- AdEd 5101—Strategies for Teaching Adults
- EPsy 5115—Psychology of Adult Learning and Instruction
- EdPA 5036—Ethics, Morality, and Values in Education

Choose one course from:

- EdPA 5021, EdPA 5032, WCFE 5301
- EdEd 5103, BIE/HRD 5629, CI 5133

Complete at least 25 credits from the following:

**Management Track**

- *ABus 4021, EPsy 5152, HRD 5302, PA 5131

In addition, students must choose a management track or education track of study.

**Information Networking**

**B.A.S.**

This degree is an interdisciplinary blend of computer science, management and information systems, engineering, and liberal arts. Students develop skills to become computer network architects or engineers or pursue other professional career tracks related to information networking. The information networking program is offered in partnership with North Hennepin Community College (NHCC), Brooklyn Park, MN. Approximately 60 credits of lower division requirements can be completed in residence at NHCC.

The program was designed by faculty from the University and networking professionals from industry in response to the needs, confirmed by market research, for networking professionals in all areas of business, education, and government.

**Admission Requirements**—To be considered for admission to the program, students must complete at least 45 credits of the designated prerequisites, including Math 1271, 1272, 2243; Phys 1301, 1302; CSci 1901, 1902, and 2021. A minimum overall GPA of 2.60 is required for prerequisite courses.
The College of Continuing Education collaborates with other colleges at the University of Minnesota, community colleges, and other institutions, as well as business and industry, to offer new programs and services.

Degree Requirements
Students must complete at least 120 credits including 45 credits in prerequisites and 51 credits in the major. Students must also complete 27 credits of electives with the following distribution: 3 credits in the social sciences; 6 credits in the arts or humanities; 6 credits at the 4xxx or 5xxx level in computer science, electrical and computer engineering, information and decision sciences, applied business, or rhetoric; and 12 credits at any level and in any discipline.

Required Courses
Required courses for the information networking major come from other programs and departments, such as computer science, and electrical and computer engineering. Students must complete 96 credits from the following:

- ABus 4021—Small Group Behavior and Teamwork
- ABus 4023—Communicating for Results
- ABus 4043—Project Management in Practice
- Acct 2050—Financial Reporting
- CSci 1901—Structure of Computer Programming I
- CSci 1902—Structure of Computer Programming II
- CSci 2011—Discrete Structures of Computer Science
- CSci 2021—Machine Architecture and Organization
- CSci 4061—Introduction to Operating Systems
- CSci 4081—Introduction to Software Engineering
- CSci 5131—Internet Programming
- CSci 5211—Data Communications and Computer Networks
- CSci 5212—Network Programming and Administration
- Econ 1101—Principles of Microeconomics
- or Econ 1102—Principles of Macroeconomics
- EE 3005—Fundamentals of Electrical Engineering
- EE 3006—Fundamentals of Electrical Engineering Laboratory
- EngC 1011—University Writing and Critical Reading
- or Rhet 1101—Writing to Inform, Convince, and Persuade
- or Rhet 1152—Writing on Issues of Science and Technology
- IDS 4102—Introduction to Information System Analysis
- IDS 4153—Telecommunications: Domestic and International Policy and Regulation
- Math 1271—Calculus I
- Math 1272—Calculus II
- Math 2243—Linear Algebra and Differential Equations
- Phys 1301—Introductory Physics I
- Phys 1302—Introductory Physics II
- Psy 1001—Introduction to Psychology
- Sphc 1101—Introduction to Public Speaking
- or Rhet 1223—Oral Presentations in Professional Settings
- or Rhet 3257—Scientific and Technical Presentations
- Stat 3011—Introduction to Statistical Analysis

Final Project
Students are encouraged to complete an internship during their final year in the program.

Network Administration

B.A.S.
This degree is designed to educate students in business and networking technology so they can function in both environments. Students learn to make business decisions with an understanding of their technical implications and technical decisions with an understanding of their business purposes and needs. The degree program enables students to develop both practical technical skills useful in entry level positions, and a broad high level understanding of computer networking and business information systems. The network administration program is offered in partnership with Inver Hills Community College (IHCC), Inver Grove Heights. Approximately 60 credits of lower division coursework can be completed in residence at IHCC.

Admission Requirements—To be considered for admission to the program, students must complete a total of 45 semester credits including the required prerequisite courses. Required prerequisites include: logic, statistics, calculus, physics I and II, Intro to Networking, Intro to Microcomputer Operating Systems, Computer Programming with C++, Algorithms and Data Structures and Visual Basic or Java Programming. A minimum overall GPA of 2.60 is also required.

Degree Requirements
The curriculum contains lower and upper division courses in three broad areas: general education, business, and technical. In total there are 120 credits of required and elective courses; 18 credits in required general education courses, 41 credits in required business courses, and 47 credits in required technical courses.

Degree Requirements
(All 1xxx courses are taken at Inver Hills Community College)

*ABus 4021—Small Group Behavior and Teamwork
*ABus 4023—Communicating for Results
*ABus 4032—Quantitative Skills for Decision Making
*ABus 4041—Leadership in a Global and Diverse Workplace
*ABus 4043—Project Management in Practice
Acct 2050—Introduction to Financial Reporting
Bus 1131—The Legal Environment of Business
CS 1104—Introduction to Networking
CS 1106—Introduction to Microcomputer Operating Systems
CS 1119—Computer Programming with C++
CS 1122—Algorithms and Data Structures
CS 1114—Visual Basic or CS 1126 Java Programming
CSci 4061—Introduction to Operating Systems
CSci 5211—Data Communications and Computer Networks
CSci 5212—Network Programming and Administration
CSci 5980—Special Topics in Computer Science
Econ 1105—Macroeconomics
Econ 1106—Microeconomics
English 1108—Writing and Research Skills
English 1111—Research Writing in the Discipline
IDS 3001—Information Systems for Business Process Management
IDS 4102—Introduction to Information Systems Analysis
IDS 4151—Data Communications Systems
IDS 4153—Telecommunications: Domestic and International Policy and Regulation
Math 1114—Introduction to Calculus
Phil 1120—Logic
Phys 1041—Introduction to Physics I
Phys 1042—Introduction to Physics II
Speech 1100—Interpersonal Communication
WCSE 5011—Technology and Public Ethics
One course in humanities, music, theatre, art, or literature taken at either location
One course in sociology or psychology taken at either location
Specialization—Students must take 6 credits from a list of courses in networking, software engineering, or database design and management. See a B.A.S. adviser for a list of acceptable courses.

*Check for online availability.

Electives
Students take 6 credits in any discipline at any time.