

College of Liberal Arts and Sciences

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The College of Liberal Arts and Sciences is a world-class learning and research community. Iowa State's most academically diverse college, LAS educates students to become global citizens, providing rigorous academic programs in the sciences, humanities and social sciences within a supportive, student-centered learning environment.

Learning and Teaching Mission

The primary mission of the college is to promote learning in all its dimensions by providing the student with ample opportunities to acquire the requisite knowledge, abilities, and skills to succeed in the world beyond the university. Through coursework within the major and in general education, students will develop skills in reasoning, analysis, and communication; achieve an understanding of the intellectual, historical, and artistic foundations of culture; and work to strengthen their abilities to interact with people, cultures, and the environment in an ethical and sensitive manner. To achieve these learning goals, the college asks students to acquire depth in learning within disciplines of their own choosing, and to acquire breadth through general education courses and electives.

A bachelor's degree in liberal arts and sciences is the end result of a curriculum that connects and integrates study in a major with general education. Requirements for a degree are deliberately flexible. Students select programs of study suited to a variety of interests and goals. Students having academic interests not fully met by departmental majors may also pursue a major offered by one of the college's interdepartmental programs or may apply for an undergraduate major in Interdisciplinary Studies. The college also participates in the University Honors Program allowing students with exceptional academic promise to develop unique and challenging programs of study. Additionally, the college collaborates with the School of Education to support students seeking Teacher Licensure.

The college has four curricula: a curriculum in Liberal Arts and Sciences, leading to the Bachelor of Arts or the Bachelor of Science degree; a curriculum in music, leading to the Bachelor of Music degree; a curriculum in liberal studies, leading to the Bachelor of Liberal Studies degree; and a curriculum in Software Engineering, leading to the Bachelor of Science degree.

The college also is home to the Open Option Program that prepares students for any curriculum at the University.

High School Preparation/ Admission Requirements

Students entering the college are required to present evidence of the following high school preparation:

- 4 years of English (typically includes courses in literature as well as courses in speech and composition, including at least one senior-level writing course)
- 3 years of social studies (typically includes two semesters of world history, two semesters of American history, and a semester of American government with electives chosen from areas such as economics, sociology, or psychology)
- 2 years of a single world language (Note: A minimum of 3 years of a single world language in high school meets the world language graduation requirement in the College of Liberal Arts and Sciences. Three years or more of a single world language are strongly recommended for students who wish to continue their work in that language at the university.)
- 3 years of mathematics (preparation includes two semesters of beginning algebra, two semesters of geometry, and two semesters of intermediate algebra; a fourth year of study involving analytic geometry, trigonometry, linear algebra, and/or calculus is strongly recommended for students who will major in mathematical or scientific disciplines)
- 3 years of science (at least two of these years chosen from biology, chemistry, and physics)

Recommended but not required as a condition of admission to the College of Liberal Arts and Sciences is one semester of computer experience. (Such a course should stress problem-solving with computers and should not substitute for courses in mathematics. In schools where computer use is an integral part of most courses, separate instruction in computers is not necessary.)

Students who transfer from another college or university with at least 24 credits of satisfactory coursework may be exempt from most of these requirements. Students who do not meet the requirements listed here may be admitted with a limited number of deficiencies. Contact the college office for further information about resolving these deficiencies.

Transfer Students

To graduate from the College of Liberal Arts and Sciences, a transfer student must complete the general requirements of the college as well as those of the university. Students planning to transfer to Iowa State University for the purpose of enrolling in the College of Liberal Arts and Sciences are advised to contact the college office for information concerning degree program requirements. Prospective transfer students are urged to learn about the academic programs that are of interest to them well before arriving on campus so that pre-transfer courses are appropriate to the planned major and transferable toward graduation from ISU. Additional information concerning transfer credit evaluation may be obtained through the Office of Admissions as well as the department in which a student is interested.

A transfer student in the College of Liberal Arts and Sciences may choose to graduate under the catalog in effect at the time of his or her graduation or under one of the five immediately preceding catalogs, provided that it covers the period of his or her enrollment either at Iowa State or any other accredited school. Full requirements of the chosen catalog must be met though adjustments will be made in instances where courses are no longer available or where programs have been changed. A transfer student is responsible for reviewing his/her transfer credit evaluation with the academic adviser during the first semester of enrollment.

For information on articulation/transfer agreements that apply to students who have earned Associates of Arts degrees from an Iowa public community college or who have satisfied general education requirements at the University of Northern Iowa or in the College of Liberal Arts at the University of Iowa, see Articulation/Transfer Agreements in the Admission Transfer Information section of the catalog.

University Requirements

The university requirements for the bachelor's degree, including statements of academic standards, learning goals, the university residence requirement, the communication proficiency requirement, U.S. diversity and international perspectives requirements, and the library requirement, appear in the Colleges and Curricula section of this catalog.

Curriculum in Liberal Arts and Sciences

To obtain a bachelor's degree from the College of Liberal Arts and Sciences curriculum in liberal arts and sciences, an undergraduate student must earn a minimum of 120 semester credits including a minimum of 32 semester credits earned in residence at Iowa State University. In addition, the student must meet university requirements, noted above, college general education, world language, advanced communication, advanced credit requirements, and the requirements of a major. Courses taken on a pass/not pass basis may be counted toward the required total of 120 credits, and may be used to meet the advanced credit requirement, if appropriate, but may not be used to satisfy any other graduation requirement. No more than 9 credits of 490 (Independent Study) courses in a single discipline may be counted toward graduation.

The major in Interdisciplinary Studies (B.A., B.S.) is available for undergraduate students who have unique interdisciplinary educational goals. Such a major is designed by the faculty and the student and is approved only when the educational goals cannot be met by a reasonable combination of existing majors, minors, and electives.

General Education

Requirements and Learning Goals

The central importance of a general education is reflected in the learning goals of each of three disciplinary areas. Whereas the courses in a major are designed to develop mastery of a specific field or discipline, courses in general education are designed to establish a strong, intellectual foundation to support learning for all majors.

General Education Areas

The general education areas with their minimum credit requirements for the College of Liberal Arts and Sciences are:

- Arts and Humanities—(Minimum 12 credits). The student should develop an understanding of human cultural heritage and history, and an appreciation of reasoning and the aesthetic value of human creativity.
- Natural Sciences and Mathematical Disciplines—(Minimum 11 credits, including 3 in the mathematical disciplines and 8 in the natural sciences). The student should experience science as a rational search for understanding the structure and behavior of the natural world, and should appreciate mathematics as a valuable tool of the sciences and as an intrinsically important way of thinking.
- Social Sciences—(Minimum 9 credits). The student should develop an appreciation of the principal methods of studying human behavior and an understanding of the structure and functioning of institutions.

Lists of courses approved for the three general education areas are available on the LAS College website (<http://www.las.iastate.edu/students/academics/general-education>).

Because students fulfill, in part, the learning goals of the area of their first major by taking courses in their programs of study, the minimum number of general education credits required in the area of the first major is reduced from that listed above by 3 credits. Students in Liberal Studies or Interdisciplinary Studies majors must complete the minimum requirements in all three areas.

Courses from the department of the first major may not be applied to general education requirements. Courses cross-listed with a course in the student's first major may be used to satisfy either major requirements or general education requirements, but may not be used more than once. Students may not apply the same course in more than one general education area.

World Language Requirement

The faculty of the College of Liberal Arts and Sciences believes that undergraduate students should acquire elementary practical experience in a second language, should be introduced to the theoretical study of language structure, and should begin to develop an understanding of a second culture through study of that culture's language.

As a means of achieving this objective, a student must satisfy a graduation requirement equivalent to the first year of university-level study in one world language (normally, completion of a two-semester sequence in any one world language). Students who have completed three or more years of high-school world language study (or the equivalent academic record or certification of proficiency in American Sign Language) are deemed to have met the LAS World Language Requirement. These students may not enroll in or receive credit for 101 or 102 in those languages nor may they take those courses on a remedial basis; test-out credit may be obtained by passing an appropriate examination or by completing an advanced sequence (200-level or higher) in that language.

Students who have completed more than one year but less than three years of high-school world language study may satisfy the World Language Requirement by (a) passing the exam for credit at the 102 level, (b) receiving a passing grade in a 102 world language course, (c) receiving a passing grade in a world language course at the 200-level or higher, (d) being a native speaker of a language other than English and passing English 150 and 250 with a grade of C- or better, (e) completing a major in any world language, or (f) in the case of Spanish, earning a passing grade in SPAN 097 Accelerated Spanish Review.

Before enrolling in either SPAN 097 Accelerated Spanish Review or a 102 level language course, students are advised to take the on-line placement test available at www.language.iastate.edu. SPAN 097 is designed for students who need additional remedial work in the language at the first-year level (101-102) and are not planning to continue their language study at the second-year level (201-202). Students who have completed SPAN 097 and wish to pursue further study in Spanish at the 201-202 level may enroll in 102.

Questions about the World Language Requirement and how to meet it should be directed to the Department of World Languages and Cultures. Credits applied toward the World Language Requirement cannot be used to satisfy the general education requirements, but students who have fulfilled the World Language Requirement may apply additional courses in world languages toward the appropriate general education areas.

Advanced Communication Skills

The continued development of communication skills following the sophomore year is the responsibility of the student's major department. The department promotes this development by adopting measures to certify the writing proficiency of its own majors. Certification occurs upon satisfactory completion of a designated course in

which writing is evaluated and is a significant component. This designated course may be either a course required in the student's program or an advanced writing course offered by the Department of English, such as:

ENGL 302	Business Communication	3
ENGL 305	Creative Writing: Nonfiction	3
ENGL 314	Technical Communication	3

Advanced Credit Requirements

To obtain a bachelor's degree from the College of Liberal Arts and Sciences, curriculum in liberal arts and sciences, a student must earn at least 45 credits at the 300 level or above taken at a four-year college. All such credits, including courses taken on a pass/not pass basis, may be used to meet this requirement.

The major must contain at least 8 credits in courses taken at Iowa State University that are numbered 300 or above and in which the student's grade is C or higher. In addition, the average grade of all courses in the major (those courses listed under major on the degree audit) must be 2.0 or higher.

Credit by Examination Program

Individual departments may use CLEP Subject Tests for testout of specific courses. Students in the College of Liberal Arts and Sciences may use CLEP General Test credits as free electives but not toward any of the general education area requirements.

The Major

Students must show they have achieved depth in a specialized area by completing successfully the requirements and learning goals of a major. A major is comprised of 24 to 48 credits in a specific discipline as determined by the faculty. Tracks within a major must have a common 24 credit core. Some courses outside the major discipline may also be required as supporting work for the major. (See Index for page reference to individual department and program requirements.) Courses in the first major listed on the degree program may not be counted in the general education groups.

Courses meeting the requirement of additional majors may be counted in the general education groups. When choosing an additional major, students must confirm that the additional major is allowable (see list under "Double Majors").

See the Majors tab above for a listing of majors.

Double Majors

Students may elect a second major from the departments and program areas in the College of Liberal Arts and Sciences, or from a major field offered for the bachelor's degree in another college of the university. Double majors between the following are not allowed: Chemistry with Biochemistry and Agricultural Biochemistry; Biology with Animal Ecology, Agricultural Biochemistry, Biochemistry, Genetics, and Microbiology; any combination of Journalism and Mass Communication, Advertising, and Public Relations. A student in the Bachelor of Liberal Studies or Bachelor of Music curricula may not add a major from the Liberal Arts and Sciences curriculum, though they may work toward a second degree in the Liberal Arts and Sciences curriculum.

To be awarded a double major both major departments must approve the degree program, and if those majors involve two colleges, both deans must approve. Such programs must fulfill the general education requirements of the college of the primary major. If one major leads to the B.A. degree and the other to the B.S. degree, the degree awarded will be the one offered by the department of the primary major.

If the primary major may lead to either a B.A. or a B.S., a student may choose to receive either degree. In all cases, the student must satisfy the requirements of each major and of the degree that is chosen for the primary major. Students with a primary major in another college who wish to take a second major in the College of Liberal Arts and Sciences are not required to meet the Liberal Arts and Sciences General Education and World Language Requirements.

A student may earn two degrees in the Liberal Arts and Sciences curriculum with two appropriate majors and at least 30 additional credits. Any degree offered by this college may be earned together with a degree and a major in any other college of the university. For the requirements for two degrees, see Two Bachelor's Degrees in the Degree Planning section of the catalog.

Minors

A minor, which is optional, must consist of at least 15 credits, with at least 6 credits in courses numbered 300 and above taken at ISU with a grade of C or higher. The minor must include at least 9 credits that are not used to meet any other department, college, or university requirement.

A list of minors offered by the college of Liberal Arts and Sciences can be found on the University Minors page.

Courses applied toward the general education groups may be used to meet the requirements of a minor. See University Minors page for more information.

If a student declares a minor and completes the requirements specified by the offering department/program, the minor will be recorded on the transcript.

Certificate Programs

The LAS College also administers certificate programs in Community Leadership and Public Service and in Latin American Studies. Students interested in pursuing these certificates are advised to consult with their academic adviser and with the relevant program that administers the certificate. Completion of a certificate will be recorded on the transcript.

Electives

Students will take additional courses, freely elected, sufficient to accumulate a total of 120 credits. These additional courses together with the general education courses may be used to meet the requirements of a minor or of another major, provided that they are taken on a graded basis.

Planning the Program of Study

Careful, comprehensive planning is important for meeting graduation requirements and taking advantage of the resources offered by the university. Each student is encouraged to work with his or her academic adviser in developing a four year plan as soon as possible after declaration of the major. A degree audit listing all completed courses and those remaining to be taken for fulfillment of the degree requirements in the student's chosen major is provided to the student and the adviser through AccessPlus. The student should review the audit each semester and consult with the adviser when changes are required. Any changes to the audit must be approved by the academic adviser and by the dean's office. Students are responsible for reviewing and updating their degree audits in a timely fashion in order to avoid delays in graduation.

During the first two years, students should meet proficiency requirements in ISU Comm Foundations (English 150, 250) and Information Literacy (LIB 160) and make progress toward meeting the general education requirements. The third and fourth years should emphasize completion of the major (and minor, if elected) and general education requirements, and should give the student an opportunity to take electives. Students seeking the enhanced academic opportunities provided by Study Abroad, National Student Exchange, and Internships will want to engage in careful planning of the Program of Study.

Academic Advising Learning Outcomes

Through their experience with academic advising, students will:

Develop an understanding of the structure, application, and goals of a liberal arts education in relation to their academic development.

Be able to formulate appropriate questions, seek information, and evaluate and apply academic advice.

Know the requirements, policies and protocol of the university, college, and department as they relate to their educational experience.

Understand how degree programs can be enhanced by study and experiences tailored to their intellectual and personal goals.

Be able to identify and utilize university resources effectively to:

- Satisfy degree requirements
- Plan programs of study, including selection of appropriate courses and registration
- Discover how interests, skills and goals connect to fields of study and careers
- Link curricular and co-curricular activities
- Research and prepare for advanced study and/or careers
- Share responsibility for a mentor-mentee relationship between advisee and adviser.

The Open Option

Many students entering Iowa State University do not wish to declare a major. They want time to become familiar with the academic opportunities that the university offers and to determine the best match between their academic interests and abilities. These students enter Iowa State University as Open Option majors.

The Open Option experience is designed to help students explore majors and careers, become acquainted with the entire university, and make successful adjustments to the academic expectations of Iowa State. Open Option students are assigned academic advisers in the Liberal Arts and Sciences Student

Academic Services Office. These advisers help students with academic and career development.

During the first year, an orientation class introduces students to all of the colleges and majors on campus. An optional career development class in the second semester guides students in selecting a major and career that match their academic and personal goals.

Aided by their adviser, Open Option students select courses that allow them to sample their academic interests before committing to a specific university major. Open Option students typically declare a major during their second or third semester. In addition, students who may have started in a specific field and have discovered it is not meeting their needs may transfer into Open Option for a semester or two while they decide on a new major.

Honors Program

Students enrolled in the College of Liberal Arts and Sciences are encouraged to participate in the University Honors Program .

Liberal Arts and Sciences Honors is designed to add depth and breadth to students' programs of study and intellectual development. Students in Liberal Arts and Sciences Honors benefit from the resources and capabilities of a large and dynamic research university along with the small class sizes and intellectual community that characterize smaller, selective liberal arts colleges. Membership in LAS Honors offers specific benefits to students such as collaborations with individual faculty members on Honors projects, extended library loan privileges, 24-hour use of the Jischke Honors Building and priority registration for classes.

LAS Honors encourages freshmen as well as more advanced students to join. Graduation in the Honors Program is recognized by a special notation on the student's diploma and permanent record. Honors students wear white Honors cords at graduation.

Reserve Officers' Training Corps Programs (ROTC)

The College of Liberal Arts and Sciences also offers students the opportunity to combine their academic programs with ROTC programs in Military Science (Army), Naval Science, and Air Force Aerospace Studies.

Teacher Licensure

Teaching licenses are issued by the Iowa Board of Educational Examiners. The Recommending Officer for the ISU University Teacher Education Program submits each candidate file after that candidate is determined to be eligible for licensure. Teaching licenses are issued for a specific teaching level, e.g., grades 5-12. Subject area endorsements are listed on the candidate's license. The College of Liberal Arts and Sciences collaborates with the School of Education in approved licensure programs. Students who plan to teach in secondary schools (grades 5-12) may qualify for a license by completing an approved licensure program in one of the following majors:

- Biology
- Chemistry
- Earth Science
- English
- History
- Mathematics
- Music (through the Bachelor of Music curriculum)*
- Physics
- World Languages and Cultures (Endorsements are available in French, German, and Spanish.)

Students may also add these additional endorsements to their primary license:

- English as a Second Language
- General Science
- Physical Science
- Social Studies
- Speech Communication
- World Languages and Cultures (Chinese, Latin, and Russian)

*Students in the College of Liberal Arts and Sciences who complete the approved licensure program in music education (BM degree with Vocal K-12 option or Instrumental K-12 option) may apply for a teaching license that allows them to teach music in grades K-12.

For further information, see Teacher Education .

Preprofessional Programs

Students in the College of Liberal Arts and Sciences may participate in preprofessional programs in human health-related fields, law, and theology by taking the courses required for admission to professional schools. Students may enter the college with the designation Premed, Prelaw, or Preprofessional Health Programs. Most will earn a bachelor's degree by choosing a major and meeting the requirements for the major while taking the preprofessional courses.

Others will spend one to three years as students in the college before transferring to a professional school to which they have applied and been accepted. For further information, see Opportunities for Preprofessional Study .

The College of Liberal Arts and Sciences participates in a 3+3 program with the Law Schools at Drake University and at the University of Iowa. Visit the Liberal Arts and Sciences Student Academic Services office for details.

Experiential Learning (Internship/Co-op Program)

The Experiential Learning (Internship/Co-op) Program assists students in gaining career-related experience while going to school. Internships/Co-ops provide students with the opportunity to gain specific skills, apply academic knowledge in practical situations, pretest their career choice, earn a salary, and establish a network of professional contacts.

Most internships are full-time and last for a semester or a summer, but a part-time experience is possible. Students wishing to receive academic credit for their internship must make arrangements with relevant faculty in advance of their internship experience. In contrast, co-op students work full-time on an extended basis (work two semesters) or on an alternating basis (work, school, work, etc.) during any semester (fall, spring, summer).

It may take students participating in the Experiential Learning (Internship/Co-op) Program an additional semester or more to complete their academic curriculum requirements. For additional information, contact Liberal Arts and Sciences Career Services.

Curriculum for Bachelor of Music

The Department of Music offers a Bachelor of Music degree (B.Mus.) as well as a Bachelor of Arts degree in music. For information about both degrees, see Music , Undergraduate Study.

In order to receive teacher certification in music, students must earn the Bachelor of Music degree.

Candidates for the Bachelor of Music must earn a minimum of 125-146.5 credits (depending on the option chosen) including a minimum of 32 credits in residence at Iowa State University and a minimum of 45 advanced credits in courses numbered 300 or above and complete the following requirements:

- General education 38.5-46.5 credits
- Music core 47 credits
- Music option 31-52.5 credits

Students must select one of the following options: music education [vocal or instrumental], performance [voice, piano, organ, string instruments, wind or percussion instrument], or composition.

Curriculum for Bachelor of Liberal Studies

The LAS College administers a bachelor's degree program in Liberal Studies. This degree, the Bachelor of Liberal Studies (B.L.S.), was established by the three Iowa Regent universities to meet the needs of lowans who want to earn a college degree but whose circumstances present obstacles to completing a traditional on-campus degree program. The B.L.S. is a general studies degree in the liberal arts. There is no traditional major. Instead, students take coursework in three areas of distribution. These areas may be focused in a single discipline or diversified over several disciplines. With the assistance of a B.L.S. adviser, students can structure a program that meets their individual educational, vocational or personal goals.

For specific degree requirements, see Liberal Studies .

Curriculum for Software Engineering

A Bachelor of Science degree in software engineering is jointly administered by the Department of Electrical and Computer Engineering (College of Engineering) and the Department of Computer Science (College of Liberal Arts and Sciences). The program is aimed at creating high-quality software in a systematic, controlled, and efficient manner. The specific objective of the program is to educate students on principles, processes, techniques, and tools for producing, analyzing,

specifying, designing and evolving software. A broader objective is to cultivate among students intellectual curiosity, problem solving skills, good learning habits, effective communication skills, leadership, and teamwork.

This interdepartmental program enables students to take a range of Software Engineering courses, as well as elective courses from both Computer Science and Computer Engineering as part of their degree program.

For specific degree requirements, see Software Engineering .

Departments of the College

Majors and minors in the College of Liberal Arts and Sciences are administered by the following departments:

- Air Force Aerospace Studies
- Anthropology
- Biochemistry, Biophysics, and Molecular Biology
- Chemistry
- Computer Science
- Ecology, Evolution, and Organismal Biology
- Economics
- English
- Genetics, Development, and Cellular Biology
- Geological and Atmospheric Sciences
- Greenlee School of Journalism and Communication
- History
- Mathematics
- Military Science (Army Reserve Officers' Training Corps)
- Music and Theatre
- Naval Science
- Philosophy and Religious Studies
- Physics and Astronomy
- Political Science
- Psychology
- Sociology
- Statistics
- World Languages and Cultures

The Major

A list of majors in the College of Liberal Arts and Sciences is available from the "Programs, Majors" button at the top of the Colleges and Curricula page.

Cross-disciplinary studies in the College of Liberal Arts and Sciences encompass a variety of interdisciplinary and cross-disciplinary areas of study as well as courses that cross established departmental lines. Students may enroll in Program courses; declare majors or minors where offered, or develop an Interdisciplinary Studies major built upon Program offerings. Certificates are also available as separate foci of studies beyond a student's major or minor. (see Index for Program courses).

Cross-Disciplinary Programs

African and African American Studies Program

(Minor only) African and African American Studies

American Indian Studies Program

(Minor only) American Indian Studies

Biological/Premedical Illustration Program

(Major or minor) Biological/Pre-Medical Illustration

Classical Studies

(Minor only) Classical Studies

Communication Studies

(Major or minor) Communication Studies

Criminal Justice Studies

(Minor only) Criminal Justice Studies

Environmental Science

(Major or minor) Environmental Science

Environmental Studies

(Major or Secondary minor) Environmental Studies

Honors Program in Liberal Arts and Sciences

Honors Program

Interdisciplinary Studies Program (Major only)

(Degree Tracks: Criminology and Criminal Justice Studies; Classical Studies; U.S. Latino/a Studies)

Interdisciplinary Studies

International Studies Program

(Second major or minor) International Studies

Linguistics Program

(Major or minor; graduate minor) Linguistics

Premedical and Preprofessional Health Programs

Preprofessional Study

Sustainability Program

(Minor only) Interdisciplinary Minor in Sustainability (<http://www.las.iastate.edu/sustainability>)

Teacher Education Program

Teacher Education

Teaching English as a Second Language

(Minor) Teaching English as a Second Language

Technology and Social Change

(Minor, graduate minor) Technology and Social Change

U.S. Latino/a Studies Program

(Minor) U.S. Latino/a Studies

Women's and Gender Studies Program

(Major or minor) Women's and Gender Studies Program

Certificate Programs**Community Leadership and Public Service**

(Certificate only) Community Leadership and Public Service Certificate

Latin American Studies

(Certificate only) Latin American Studies Certificate (<http://www.las.iastate.edu/international-study-abroad/latin-american-studies-certificate>)