COLLEGE OF AGRICULTURE AND LIFE SCIENCES

Overview

The College of Agriculture and Life Sciences (Cornell CALS) is a pioneer of purpose-driven science and Cornell University's second largest population of students, faculty and staff. We work across disciplines to tackle the challenges of our time through world-renowned research, education and outreach. The questions we probe and the answers we seek focus on three overlapping concerns: natural and human systems; sustainable food, energy and environmental resources; and social, physical and economic well-being.

Since our founding, we have evolved continuously to meet the changing needs of our world. Our top-ranked programs include more than 20 majors and nearly 40 minors across our areas of science.

We aim to leave the world better than we found it, so we seek out those not simply driven to master their discipline, but who are also passionate about doing so to serve the public good. CALS is fundamentally invested in improving the lives of people, their environments and their communities both in New York state and around the world.

The Cornell CALS experience empowers us to explore the boundaries of knowledge, supported by the leading minds of today and surrounded by the leading minds of tomorrow.

Website: cals.cornell.edu (https://cals.cornell.edu/)

General Information

Administration

- Benjamin Z. Houlton, Ronald P. Lynch Dean
- Lori Leonard, Senior Associate Dean
- Corrie Moreau, Senior Associate Dean
- Anne Brandt, Assistant Dean
- Sharon Detzer, Associate Dean
- Sarah Giroux, Associate Dean
- Ann LaFave, Assistant Dean
- Xingen Lei, Associate Dean
- Peter Paradise, Associate Dean
- Chris Smart, Associate Dean
- Margaret Smith, Associate Dean
- Julie Suarez, Associate Dean
- Andrew Turner, Associate Dean
- Andy Vail, Associate Dean

Office of Academic Programs

The Office of Academic Programs (https://cals.cornell.edu/faculty-staff/ office-of-academic-programs/) is a unit within the College of Agriculture and Life Sciences (CALS) encompassing the Office of Admissions (https://cals.cornell.edu/education/admissions/undergraduateadmissions/), the Office of Student Services (https://cals.cornell.edu/ undergraduate-students/cals-office-of-student-services/), the Office of Curriculum Development and Instructional Support (OCDIS) (https:// cals.cornell.edu/faculty-staff/office-of-academic-programs/officeof-curriculum-development-instructional-support/), and the Office of Professional Programs and Extended Learning (OPPEL) (https:// cals.cornell.edu/education/admissions/graduate-admissions/ professional-masters-degrees/). These offices collaborate on recruitment, enrollment, degree attainment, career development and academic support for all CALS Undergraduate and Professional Masters Students. The office also oversees the curricular and compliance efforts across the college.

Office of Student Services

The Office of Student Services (https://cals.cornell.edu/undergraduatestudents/cals-office-of-student-services/) collaborates with CALS students to help define and navigate their undergraduate journey, offering a centralized hub of resources that unlock transformative opportunities aligned with their academic goals. Students receive comprehensive guidance and support across various areas, including academic advising, resource navigation, degree tracking, career planning, experiential learning (such as research, internships, and international programs), skill development, graduate school preparation, and job search strategies. Students can access Student Services staff, support, and resources at 140 Roberts Hall and in the CALS Zone (112 Mann Library).

Office of Curriculum Development and Instructional Support

The OCDIS (https://cals.cornell.edu/faculty-staff/office-of-academicprograms/office-of-curriculum-development-instructional-support/) advances strategic curricular development throughout the college. The Director of this office provides guidance and implementation for pedagogical advancements, builds developmental resources to faculty, and launches new academic initiatives across the college. This office also supports shifts in coursework and the formation of new degrees.

Undergraduate Admissions Office

Each year, the College of Agriculture and Life Sciences (CALS) Undergraduate Admissions Office is responsible for admitting and enrolling a talented, capable, and compelling class of students from a broad range of backgrounds and perspectives. The admissions work meets college and institutional enrollment goals, while both reflecting and supporting the college mission. This includes first-year, transfer, and internal transfer admissions processes. The office engages in various forms of in-person and virtual outreach to prospective students and their families, evaluates and makes decisions on more than 7,000 applications each year, and coordinates events for admitted students. The Admissions Office staff also advises and supports the CALS Ambassadors program.

The office is located in 177 Roberts Hall. Staff members include Heather Marcotte, Erin Treat, Anna Cummings, Jenn King and Callan Robinson. The staff can be contacted via email at cals_admissions@cornell.edu (https://catalog.cornell.eduemailto:cals_admissions@cornell.edu) or phone at (607) 255-2036.

Undergraduate Admissions

In CALS, students apply to one of 20+ majors and are selected based on academic preparation and demonstrated fit for Cornell CALS and their chosen major. A significant factor taken into consideration by the admissions committee is how well a student's academic interests relate to the mission of the college. Majors fall within the life, agricultural, environmental, and social sciences.

Enrollment

Undergraduate enrollment is approximately 3,100. Annually 750 students graduate, while new student enrollment consists of approximately 600 first year and 200 transfer students. College faculty members serve

as chairs of the Special Committees of approximately 1,100 graduate students.

Transfer Admissions

A student who has earned 12 or more credits at another accredited college or university since graduating from high school is eligible to apply to CALS as a transfer applicant. Approximately 30 percent of CALS undergraduates are transfer students who have completed part of their collegiate work at other institutions, including community colleges. Detailed information is available on the CALS Transfer Admissions webpage (https://cals.cornell.edu/education/admissions/undergraduate-admissions/transfer-applicants/).

All accepted transfer credit must be from an accredited college or university. A maximum of 60 non-Cornell credits may be transferred. Transfer credit is awarded based on review of official transcripts. Additional course information may be required to determine transfer eligibility.

Internal Transfer

A degree-seeking Cornell student in good standing may apply for Internal Transfer to CALS, to pursue a major and degree that is not available in their current Cornell college/school. Eligibility guidelines, academic requirements by major, application timelines and the process for applying are detailed on the CALS Internal Transfer webpage (https:// cals.cornell.edu/education/admissions/undergraduate-admissions/ internal-transfer/).

The process requires each student to meet with the Advising Contact in their desired CALS major, prior to applying, to ensure that the student fully understands the major requirements, along with how to complete the required courses within the timeline of their expected date of graduation. Following the meeting, the Advising Contact provides feedback to the CALS Admissions committee regarding the student's candidacy. Additionally, the student must submit the Internal Transfer application, which includes a personal statement and resume.

Students who are well-positioned for Internal Transfer are those who seek to enter CALS as rising sophomores, mid-semester sophomores or rising juniors. The strongest candidates have met the academic requirements by major, are supported by the Advising Contact in their desired major, and are able to communicate, through their personal statement and resume, why pursuing their desired major within CALS is the best fit for them at Cornell.

Visiting Students

A limited number of non-degree candidates who want to take courses in the college are admitted each year as Visiting Students. Applicants should complete the Transfer Common Application, including the Cornell Supplement to indicate the special/visiting student intentions and coursework.

Off-Campus Students

Courses that Cornell students participate in that are approved creditbearing programs off Ithaca's campus during the fall or spring semester will count towards the number of credits that can be brought in from an external institution. For a list of programs and more information, please refer to Special Academic Options (p. 3).

Departments

The College of Agriculture and Life Sciences offers more than 20 undergraduate majors and nearly 40 minors, many of which are crossdepartmental to take advantage of the knowledge experience and expertise of the faculty from several disciplines. Faculty identify a sequence of courses that constitute the requirements for each major. In addition, all students must meet the minimum distribution requirements of the college. Courses of study are designed to provide systematic development of basic skills and concepts as well as critical thinking. Many majors provide the opportunity for students to concentrate in a particular focal area.

Our curriculum flexes to align with student's individual interests and ambitions. We encourage students to experiment and make connections across the life, agricultural, environmental and social sciences that are at the core of the CALS experience.

Departments / Division / Schools

The links below will take you to the departmental websites for each area.

- · Animal Science (https://cals.cornell.edu/animal-science/)
- Biological and Environmental Engineering (https://cals.cornell.edu/ biological-environmental-engineering/)
- Computational Biology (https://cals.cornell.edu/computationalbiology/)
- · Communication (https://cals.cornell.edu/communication/)
- Division of Nutritional Sciences (https://www.human.cornell.edu/ dns/)
- Dyson School of Applied Economics and Management (https:// dyson.cornell.edu/programs/undergraduate/)
- Earth and Atmospheric Sciences (https:// www.engineering.cornell.edu/eas/)
- Ecology and Evolutionary Biology (https:// ecologyandevolution.cornell.edu/)
- Entomology (https://cals.cornell.edu/entomology/)
- Food Science (https://cals.cornell.edu/food-science/)
- · Global Development (https://cals.cornell.edu/global-development/)
- Landscape Architecture (https://cals.cornell.edu/landscapearchitecture/)
- Microbiology (https://cals.cornell.edu/microbiology/)
- Molecular Biology and Genetics (https://cals.cornell.edu/molecularbiology-genetics/)
- Natural Resources and the Environment (http://cals.cornell.edu/ natural-resources-environment/)
- Neurobiology and Behavior (https://nbb.cornell.edu/)
- School of Integrative Plant Science (https://cals.cornell.edu/schoolintegrative-plant-science/)
- · Statistics and Data Science (https://stat.cornell.edu/)
- Undergraduate Biology Program (https://cals.cornell.edu/biologicalsciences/)
- Viticulture & Enology (https://cals.cornell.edu/viticulture-enology/)

Additional Course Offering Areas:

- American Indian and Indigenous Studies (https://cals.cornell.edu/ american-indian-indigenous-studies/)
- Education (https://cals.cornell.edu/education/degrees-programs/ education-minor/)
- Natural Resources and the Environment (https://cals.cornell.edu/ natural-resources-environment/)
- Nondepartmental Courses (ALS and LEAD subject codes)¹

¹ Agriculture and Life Sciences (ALS) courses are not associated with any departments, other than instructors from departments or the Center for Teaching Innovation. These courses have broad interest among students across the college.

Special Academic Opportunities Early Enrollment Pathway

Outstanding undergraduate students may be admitted for professional study in the College of Veterinary Medicine, Cornell Law School, or the SC Johnson College of Business before completion of their undergraduate program. To be considered, a student must:

- · Fulfill all University Graduation requirements.
- · Fulfill all college requirements.
- · Fulfill all major(s) requirements.
- Complete a minimum of 108 of their 120 academic credits toward the Bachelor of Science before the start of the senior year and have been accepted by one of the above-named professional schools.
- No more than 12¹ academic credits from the student's first semester in the pathway will be applied toward general elective requirements to reach the 120 credits required to complete the CALS Bachelor of Science degree.
 - The 12 credits from the Professional Pathway will count toward the maximum of 60 transfer credits allowed toward the undergraduate degree.
- Once 120 credits have been reached, students will have met all undergraduate degree requirements and their bachelor's degree will be conferred on the next degree date.
- Students considering applying are required to confirm eligibility with the pre-law or pre-vet advisor and an advisor in CALS Office of Student Services, located in 140 Roberts Hall early in their sophomore year to discuss eligibility and application requirements.
- ¹ The 12 credits from the Professional Pathway will count toward the maximum of 60 transfer credits allowed toward the undergraduate degree.

Opportunities in Research

Undergraduate Research

Students at the College of Agriculture and Life Sciences are exposed to a wide variety of learning experiences. One of the best ways for a student to gain knowledge beyond the textbook is to engage in original research.

Many opportunities for research (https://cals.cornell.edu/undergraduatestudents/undergraduate-student-research/) exist across the College of Agriculture and Life Sciences and the University (https:// experience.cornell.edu/).

Students may be able to work on a faculty member's research project for pay. Opportunities can be identified by contacting individual faculty members or departmental offices. A second option is for students to receive credit through a 4990-level course within a department by conducting their own research project under a faculty mentor. Hundreds of students each year conduct research for credit.

Juniors and seniors usually have the course background to engage in research, but first-year students and sophomores also may be qualified

to do some types of research. Off-campus research experiences are also available for pay or as internships.

Research Honors Program

The Research Honors Program provides students with a special opportunity to work with a faculty mentor to experience the research process. The Bachelor of Science degree with "distinction in research" is conferred upon those students who, in addition to having completed the requirements for the B.S. degree, have satisfactorily completed the honors program and have been recommended for the degree by the honors committee.

Research may be done in these program areas: animal sciences, biological sciences, biology & society, communication, entomology, environment and sustainability, information science, landscape studies, nutritional sciences, physical sciences, plant sciences, and social sciences. Students in any CALS major may be eligible to participate in most of these program areas. Each program area has its own requirements in addition to the college requirements. After reviewing the requirements of each program area (below), students' questions may be directed toward the appropriate program area chair.

Visit Undergraduate Research Opportunities (https://cals.cornell.edu/ undergraduate-students/undergraduate-student-research/) for information about identifying a research topic, conferring with a faculty member, and undergraduate funding opportunities.

Research Learning Outcomes

Students will be able to:

- Identify a question or topic requiring original research through critical examination of existing literature
- Formulate the question into one or more testable hypotheses or central arguments and develop methods suitable to evaluate these hypotheses or arguments
- Obtain information relevant to the hypotheses or arguments through effective use of contemporary methods and research techniques
- Critically analyze the evidence obtained to refute or support the hypotheses or arguments
- Integrate the findings of this research to the findings of others and to larger issues in the discipline
- Communicate effectively through writing the thesis and oral or poster presentations

Honors Degree Requirements Application Requirements and Procedures

An undergraduate wishing to enroll in the honors program must have completed a minimum of 55 credits, at least 30 while at Cornell. Additionally, the student must have a cumulative Cornell GPA of 3.0 or higher at the time of entry and at the completion of the program, unless otherwise noted by a particular program.

Interested students should make arrangements and discuss research ideas with a faculty member by the second semester of their junior year. Students must submit an application and thesis proposal to the appropriate office in accordance with their program area procedures and deadlines. Knowing the deadlines and submission procedures for a particular program area is the student's responsibility.

Applications

• Applications for Biological Sciences students are available in the Office of Undergraduate Biology, 216 Stimson Hall.

- Applications for Biology and Society students are available at 303 Morrill Hall.
- Applications for Communication students are available online (https://cals.cornell.edu/communication/undergraduate/honorsresearch-program/comm-honors-research-program-proposal-andthesis-submission/).
- Students of all other programs should apply via the Cornell Experience CALS Research Honors Program website (https://experience.cornell.edu/opportunities/cals-research-honors/).

The CALS Research Honors Program Committee meets in the fall to give final approval of all qualified applicants, officially enrolling them in the honors program. Additional requirements for application and completion of the honors program are specified by each program area.

Honors Degree Requirements

Students enrolled in the honors program may earn credits for their research by enrolling in an independent research course (this course is not a requirement in all program areas). Funding opportunities (https://undergraduateresearch.cornell.edu/getting-started/) are also available.

Students are required to present their research in the form of an oral presentation or poster session. Some departments have a seminar series during which honors presentations may be given; the Cornell Undergraduate Research Board (CURB) Forum (https://www.cornellcurb.com/) is another possible venue for presentations. Students should discuss presentation options with their faculty mentors.

In addition to a presentation, successful completion of the honors program requires a research report, written in the style of a master's thesis or scholarly journal article. Students may volunteer to publish their original honors research at eCommons Cornell University Library, as long as doing so does not interfere with other plans, such as patenting or publishing in a professional journal. A permission form to allow a thesis to be made available online at Mann Library can be obtained from the honors committee chair. Thesis examples are available on the web (https://ecommons.cornell.edu/communities/578e2beb-ae47-400b-805ae2ca24785665/); each program area chair may also be able to provide relevant examples.

Students in the College of Agriculture and Life Sciences wishing to participate in the Research Honors Program are not eligible for "distinction in research" by participating in a program offered by another Cornell college or administrative unit.

The research honors committee for each program area then recommends to the college registrar those students who qualify for honors. Only those who maintain a GPA of at least 3.0 and complete all of their honor requirements will be graduated with "distinction in research."

More information is available on the CALS Research Honors Program website (https://cals.cornell.edu/undergraduate-students/ undergraduate-student-research/research-honors-program/).

Honors Program Areas

Below are listed the CALS research honors program areas and their specific area requirements and deadlines. For more information is available on CALS Research Honors Program Areas (https:// cals.cornell.edu/undergraduate-students/undergraduate-student-research/research-honors/honors-program-requirements/).

Animal Sciences

The objective of the animal sciences research honors program is to provide outstanding undergraduates with the opportunity to pursue

supervised independent research and to develop an awareness of the scientific process. It is expected that the research will require significant effort and creative input by the student in its design and execution and in the reporting of the results.

Those students with majors in animal sciences who are interested in doing a research project should consult with their faculty advisors by their junior year. All students are expected to meet the college requirements in qualifying for the program and to complete the following:

- Identify a potential research honors project sponsor (i.e., a faculty member at Cornell working in the animal sciences) and secure that faculty member's commitment to sponsor the student in a research project. This should be accomplished by the second semester of the junior year or earlier. Students are encouraged to implement some research during the junior year and/or summer before the senior year.
- Enroll in the Honors Program using the CALS application form within the first 6 weeks of the fall semester, senior year.
- Register for ANSC 4990 Undergraduate Research in Animal Science if students wish to obtain course credit for their research.
- Participate in ANSC 4020 Seminar in Animal Sciences during the spring semester of the senior year and report on and discuss the project and results.
- Submit a written thesis to the Animal Sciences Research Honors Committee by the scheduled deadline (mid-April for May graduates). Specific information regarding deadlines, format, and organization for the thesis will be provided.
- Meet with the Animal Sciences Research Honors Committee for a short oral defense of the thesis following a review of the thesis by the student's mentor and the research committee.
- Submit to the honors committee chair an electronic copy of the final approved thesis (in pdf or Word format).
- Students may volunteer to publish their original honors research at eCommons Cornell University Library, as long as doing so does not interfere with other plans, such as patenting or publishing in a professional journal. A permission form to allow a thesis to be made available online at Mann Library can be obtained from the honors committee chair.
- Each year, in recognition of student honors research achievements, CALS prints a booklet of honors theses abstracts (CALS Research Honors Abstracts (https://cals.cornell.edu/undergraduate-students/ undergraduate-student-research/research-honors/honors-programrequirements/)). Students are responsible for submitting their formatted abstracts in accordance with abstract publication instructions.

Details pertaining to the specific requirements of the program can be obtained from Dr. Quirk, Department of Animal Science, 434 Morrison Hall, vs88@cornell.edu.

Biological Sciences

Students interested in the Research Honors Program in the Biological Sciences should consult with their academic advisors and with potential faculty research mentors early in their junior year. See the Biological Sciences Website (https://cals.cornell.edu/biological-sciences/researchinternships/honors-program/) for complete details. If you have additional questions related to research, applications, and program requirements, contact biohonors@cornell.edu or the Office of Undergraduate Biology, 216 Stimson Hall.

Biology & Society

The Research Honors Program in Biology & Society is designed to provide independent research opportunities for academically talented undergraduate students in Biology & Society. Students who enroll in this program are expected, with faculty guidance, to do independent study and research dealing with issues in biology and society. Students participating in the program should find the experience intellectually stimulating and rewarding whether or not they intend to pursue a research career.

Biology & Society students are considered for entry into the research honors program at the end of the second semester of the junior year. Application forms for the program are available on the Biology & Society website (https://sts.cornell.edu/bio-society/#honors-program), at our office- 303 Morrill Hall, or by contacting bsoc@cornell.edu. To qualify for the Biology & Society Research Honors Program, a student must have an overall Cornell cumulative GPA of at least 3.3, have formulated a research topic, and have found a project supervisor (with a Cornell academic appointment) and another faculty member willing to serve as their project advisor. At least one of these must be a member of the Biology & Society major. Applications will be reviewed by a committee headed by the director of undergraduate studies, who will notify students directly of the outcome. Students will be permitted to register for the honors program only by permission of the department. Students must enroll for both the fall and spring semesters. They must attend the honors seminar during the fall semester. More information on the honors program is available in the Biology & Society office, 303 Morrill.

Important Deadlines. Note: If the following dates fall on a weekend, the deadline is the preceding Friday.

- Last week of second semester of the junior year. Application for honors program submitted to 303 Morrill Hall.
- First Monday after Labor Day: a 1000- word thesis proposal with preliminary bibliography submitted to first reader.
- End of first semester. students meet with first reader to decide whether to move forward.
- March 7: First draft submitted to thesis advisor.
- April 8-15: Thesis completed in a form satisfactory for evaluation and submitted to the three readers.
- April 29-May 10: Thesis defense accomplished.
- May 13: One bound copy of completed and defended thesis submitted to the Undergraduate Coordinator in 303 Morrill Hall.

Students may volunteer to publish their original honors research at eCommons Cornell University Library, as long as doing so does not interfere with other plans, such as patenting or publishing in a professional journal. A permission form to allow a thesis to be made available online at Mann Library can be obtained from the honors committee chair.

Each year, in recognition of student honors research achievements, CALS prints a booklet of honors theses abstracts (CALS Research Honors Abstracts (https://cals.cornell.edu/undergraduate-students/ undergraduate-student-research/research-honors/honors-programrequirements/)). Students are responsible for submitting their formatted abstracts in accordance with abstract publication instructions.

Communication

The research honors program in communication offers outstanding undergraduate students the opportunity to work with a member of the communication faculty to pursue supervised independent research in the areas of media, technology, science, environment, health, persuasion, social influence, collaboration, intercultural communication, and other communication topics. The subject matter and nature of the research experience may be quite varied. Students participating should find the experience intellectually stimulating and rewarding, whether or not they intend to pursue a research career. It is expected that the research will require significant effort by the student in its design and execution, and in reporting of the results. The Bachelor of Science degree with "distinction in research" is conferred to students who successfully complete an honors thesis in communication.

The guidance and supervision of a faculty member with substantial interest and expertise is essential to the success of the research honors project. Students are strongly encouraged to meet with faculty during their junior year in order to identify someone to serve as their honors thesis advisor. Honors thesis faculty advisors must be members of the graduate field of communication. Students should enroll in COMM 4990 Independent Research their senior year to receive course credit for their honors research work.

Timeline

For Spring Graduates:

- Junior year. contact communication faculty to talk about research ideas and identify thesis advisor.
- · The proposal is due the 4th Thursday of the fall semester.
- · The thesis is due the 2nd Friday of April in the spring semester.

For Fall Graduates:

- Junior year. contact communication faculty to talk about research ideas and identify thesis advisor.
- The proposal is due the 4th Thursday of the spring semester.
- · The thesis is due the 2nd Friday of November in the fall semester.

Thesis Proposals

Students should work closely with their honors thesis advisor in developing their thesis proposals. The purpose of the proposal is twofold. First, it formalizes a plan of study and establishes a set of expectations between the student and the faculty advisor. Second, the Communication Undergraduate Curriculum Committee will facilitate a formal review of the proposal to determine whether it is consistent with honors thesis requirements and, in some cases, to make suggestions for improvement.

The proposal should be 5 to 10 typed, double-spaced pages and include the following:

- 1. Research Topic: State the problem to be studied or the topic of interest. Review the basic literature and the background of the problem or topic; include a more extensive bibliography to be consulted.
- Research Questions/Empirical Hypotheses: Specify the proposed questions to be answered or hypotheses to be tested empirically via collection of data and a mode of analysis accepted in the field of communication research.
- Research Methods: Discuss the models to be constructed (if any), sampling procedures, data collection procedures (including measurement instruments and survey or experimental designs, if appropriate), and proposed methods of analysis.

- 4. Expected Significance: State what new knowledge or information is likely to be forthcoming and why it is important. State any practical applications expected as a result of the research.
- 5. References

Thesis

After the April/November deadline, the thesis will be independently reviewed typically by two faculty committee members within about two weeks. If further revisions are required, students will be informed and a revised draft will be requested. Students who successfully complete a communication honors theses are often invited to present their research to the communication department in late April - early May or late November - early December.

We also recommend students consult the following resource as they prepare their thesis drafts:

 Recognizing and Avoiding Plagiarism (http:// plagiarism.arts.cornell.edu/tutorial/)

Application Submission

All proposals and theses should be uploaded and submitted to the Communication Undergraduate Program Coordinator through this online form (https://app.smartsheet.com/b/form/ f4a9c2ba17c84078bc1f1329895a6f61/).

Entomology

The Program: A research honors program in Entomology may be pursued by any student in the College of Agriculture and Life Sciences who meets the qualifications below. The student does not need to be majoring in Entomology. Because insects are so biodiverse, abundant, ecologically important, and used as model organisms at multiple levels of analysis, they are ideal subjects for honors study. Entomology's diverse faculty interests and extensive collections are major assets if a student selects entomology as the area for research honors study.

Though research experiences are available to all undergraduate students (see links below for academic credit options), the Research Honors program is designed to capture the full range of the scientific process, from selecting a research question, designing a study to test hypotheses (often through experimentation), analysis of data collected, writing and revising a thesis, and public presentation of the results.

Qualifications: An undergraduate intending to enroll in the Entomology Research Honors Program must be matriculated in CALS, and have completed a minimum of 55 credits, at least 30 while at Cornell. Additionally, the student must have a cumulative Cornell GPA of 3.0 or higher at time of entry to the program.

Research honors students have the option of earning academic credit by enrolling in ENTOM 4970 Individual Study in Entomology or ENTOM 4990 Undergraduate Research in Entomology during any semester while working toward a research honors thesis. Credits and grade option for satisfying requirements of the course should be discussed with the thesis advisor (below).

Note: Enrolling in an independent study course, either ENTOM 4970 Individual Study in Entomology or ENTOM 4990 Undergraduate Research in Entomology, is not a requirement for participating in the Research Honors Program in Entomology. Upon completion of the requirements and acceptance of the thesis, the student's diploma will state "with distinction in research."

Sequence of Requirements: The Entomology Research Honors Committee requires that an undergraduate student interested in embarking on a research honors project should proceed with the following steps:

- Discuss the possibility of a potential honors project with your academic advisor or potential research supervisor, preferably no later than your junior year. This timing makes it possible to carefully plan a research project and implement some research during the junior year and/or summer before the senior year, especially if field work is involved.
- 2. No later than the end of your junior year, preferably, you should select an appropriate faculty member who can serve as an honors project supervisor to oversee your research project. The research supervisor need not be your academic advisor, but should be someone whose area of expertise best suits your interests and who wants to work with you. Typically, but not necessarily, they will be in the Department of Entomology.
- Discuss and develop a project with your honors project supervisor, ultimately resulting in a brief written plan. The plan should include a statement of objectives or hypotheses, proposed methods for testing the hypotheses, along with needs for laboratory or field space or shared equipment.
- 4. No later than the end of the second week of the first semester of your senior year, submit a completed application and proposal approved by your supervisor. Applications are available online. Also submit a PDF version to the Chair of the Entomology Research Honors Committee. Earlier submission is strongly encouraged.
- 5. Talk to your project supervisor about sources of funding for undergraduate research that are available through CALS and Arts early in the fall. your chances of getting funding will be better if your project is further along.
- 6. Provide two updates on your progress to the chair of the entomology research honors committee in your last semester. In the second week of the semester, submit a brief progress report to confirm that you have made progress and expect to complete the honors thesis by the end of the semester.
- 7. By 10th of April of your last semester, you should write a brief (1paragraph) summary of your research and statement that your project will be completed by the deadline. the statement should be approved and signed by your project supervisor and forwarded to the honors chair.
- Draft(s) of your thesis should be reviewed by your supervisor, revised, and polished well before the submission deadline during the final months prior to graduation.
- 9. Submit a polished and revised digital copy in word of the final honors thesis (as approved by the honors project supervisor, with signature) to the chair of the entomology research honors committee no later than four weeks before the last day of classes in the semester in which the student anticipates graduation. the thesis will be reviewed by the chair of the honors committee and at least one other referee selected by the chair.
- 10. Reviewed theses will be returned to the student usually at least one week before the last day of classes. If reviewers indicate that changes must be made, the revised thesis should be submitted to the Entomology Research Honors Committee Chair no later than the last day of the study break before final exams begin. Referees should include a recommendation to the Entomology Research Honors Committee Chair regarding acceptability of the thesis for honors recognition.
- 11. Present a formal seminar reporting the significant findings of your research to the Department of Entomology in the Undergraduate

Research Symposium at the end of the semester of your senior year. The Chair of the Research Honors Committee will provide details on the date, time, duration of your presentation, etc.

12. Students may volunteer to electronically submit their final approved thesis (in pdf or Word format) for Mann Library. Mann Library has given CALS the opportunity to have the theses available to the public electronically if this does not interfere with other plans, such as patenting or publishing in another journal. A permission form to allow the thesis to be made available online at Mann Library can be obtained from the honors committee chair. The thesis should be turned into the Honors Chair.

Requirements for honors project supervisors. Your supervisor must agree to the following:

- Will approve your thesis proposal before it is submitted to the committee Chair
- Will provide the necessary equipment, supplies, and facilities to conduct your research
- Will guide, support, and evaluate your progress as you work towards your thesis
- Will review and provide feedback on your progress report before it is submitted
- Will review and provide feedback on your thesis before you submit the thesis for formal review

The complete text of this section can be found at the Entomology honors web page (https://cals.cornell.edu/education/degrees-programs/ entomology-major-minor/entomology-undergraduate-research-programs/).

Environment and Sustainability Program Overview

The research honors program in environment and sustainability involves original, independent research that generates novel findings in a breadth of disciplines spanning the social, biological, and physical sciences and humanities. Students are encouraged to understand and address contemporary environmental and sustainability issues through an interdisciplinary and integrated approach. Thesis candidates learn how to design and carry out research under the direct supervision and guidance of a thesis advisor.

Prospective candidates are encouraged to network early in the junior year with faculty instructors, advisors, and graduate teaching assistants to identify faculty doing work that aligns with their interests and career goals. Students doing research off campus rely on winter and summer breaks to collect data at their field sites.

In the senior year, candidates meet on a regular basis with their thesis advisor whose responsibility it is to guide and approve the thesis work. Candidates will present the findings of their work in a special symposium in May.

Thesis Timeline

Thesis work is completed early in the senior spring semester. The thesis manuscript is submitted for formal review in mid-April. Once the thesis is formally accepted, CALS candidates graduate with Distinction in Research.

Junior Year

1. Identify a thesis advisor and research topic if you did not do so in sophomore year.

2. Apply to the E&S Honors Program (https://cals.cornell.edu/ environment-sustainability/research-opportunities/honors-program/) by the end of junior year using the link on the E&S honors web page.

Senior Year

- ENVS 4990 Undergraduate Research in Environment and Sustainability can be added (in consultation with your research advisor) to receive credit for research work done in fall and/or spring. Candidates in both CALS and CAS enroll in research credits using the CALS Special Studies form. Enrollment in research credits is optional, not a requirement, in the E&S honors program.
- 2. April 15: Target date for formal thesis submission for May graduates, December and August graduates should contact the E&S Program for details on their timelines.
- 3. By the end of classes, candidates will receive thesis feedback and have an opportunity to revise their manuscript.
- 4. Thesis Revision: By the end of finals, candidates submit the final version of thesis.
- 5. May: Candidates present the findings of their thesis project in an honors symposium.
- 6. Students may volunteer to publish their original honors research on eCommons (https://ecommons.cornell.edu/communities/578e2bebae47-400b-805a-e2ca24785665/), Cornell's digital repository, as long as doing so does not interfere with other plans, such as patenting or publishing in a professional journal. Authors must sign a Release to Publish, obtained from the E&S honors program coordinator, in order to publish their thesis on eCommons.

Information Science

Students should follow the CALS social sciences guidelines to obtain research honors in information science and refer to our honors requirements (https://infosci.cornell.edu/undergraduate/info-sci-majors/ bs-information-science-cals/honors-requirements/) page for more information.

Students are accepted into the social science research honors program of the College of Agriculture and Life Sciences after.

- meeting all the college criteria described in Courses of Study
- · evaluation of the student's written application
- · approval of a detailed thesis proposal.

The application and proposal are due to the program area chair no later than the third week of the first semester of the senior year. Students must have a 3.0 GPA or better to be considered.

Each student is encouraged to begin working on this proposal with a prospective faculty thesis advisor during the junior year. The purpose of the proposal is two-fold. First, it formalizes a plan of study and establishes a set of expectations between the student and his or her faculty advisor. Second, the honors committee reviews the proposal to determine whether it is consistent with honors thesis requirements and to make suggestions for improvement. The proposal should be 5 to 10 typed, double-spaced pages and include the following:

- Research Topic: State the problem to be studied or the topic of interest. Review the basic literature and the background of the problem or topic; include a more extensive bibliography to be consulted.
- Research Questions/Empirical Hypotheses: Specify the proposed questions to be answered or hypotheses to be tested empirically

via collection of data and a mode of analysis accepted in the social sciences.

- Research Methods: Discuss the models to be constructed (if any), sampling procedures, data collection procedures (including measurement instruments and survey or experimental designs, if appropriate), and proposed methods of analysis.
- Expected Significance: State what new knowledge or information is likely to be forthcoming and why it is important. State any practical applications expected as a result of the research.
- Faculty advisors must be members of the graduate faculty. Exceptions may be granted for persons with special expertise who are deemed capable of thesis supervision; exceptions may be granted pending petition to the Social Science Research Honors Committee. Students should register for honors credit directed by the faculty research honors project advisor. Honors independent study (6 credits) can be awarded accompanying the work.
- Distinction in research is awarded upon approval of the research honors thesis by the Social Science Research Honors Committee. The research should deal with a substantive issue in one of the fields in the social sciences. Both the results of the research and the methodology (or the logical argument by which the results were achieved) must be reported. Reviews of the literature, practical conclusions or applications, or broad characterizations of an area of inquiry may constitute part of the research report but are not themselves sufficient to count as research.
- Honors theses should be written according to the form of any standard journal within the appropriate field. Three copies of the thesis must be submitted to the chair of the Social Science Research Honors Committee no later than three weeks before the last day of classes of the semester for which the degree is sought. A supporting letter from the faculty member supervising the work also must be submitted. The thesis will be independently reviewed and revisions may be required before the thesis is accepted. Final approval of the thesis requires a majority vote of the honors committee.

Landscape Studies

The research honors program in landscape studies offers outstanding undergraduates in CALS the opportunity to work with a member of the landscape architecture faculty to pursue supervised independent research in the cultural landscape, landscape archeology, environmental design resilience, community-based design and other design topics. The subject matter and nature of the research experience may be quite varied. Students participating should find the experience intellectually stimulating and rewarding, whether or not they intend to pursue a research career. The guidance and supervision of a faculty member with substantial interest and expertise in the subject is essential to the success of the research honors project. It is expected that the research will require significant effort and creative input by the student in its design and execution and in reporting the results.

Students who consider this option should be aware that honors research is undertaken above and beyond all requirements for graduation in the major of landscape architecture. It involves a number of deadlines and a considerable time commitment. Before signing on for research honors, students need to consult with their academic advisor to make sure that honors research projects will not interfere with other academic or professional objectives such as job applications, preparation of portfolios or application to graduate school as these may need to be deferred until the thesis is complete. Students are responsible for meeting deadlines and being prepared for presentations and other meetings. Although honors research credits for spring semester junior year and both semesters senior year are designated a letter grade, individual mentors may choose the R grade for work in progress until the project has been fully completed. Grade is determined by each student's mentor. The designation of "distinction in research" on the diploma is awarded at the recommendation of the faculty advisor and other referees to the honors committee chair. An outline of activities for both years is given below.

Honors Degree Requirements

The Landscape Studies Research Honors Committee requires that an undergraduate who is interested in embarking on a research honors project proceed with the following steps:

Junior year. Identify a potential research honors project sponsor and secure that faculty member's commitment to sponsor the student in the research project. This should be accomplished early in the second semester of the junior year and be finalized by the end of the spring semester.

- 1. Work with a faculty advisor to identify and formulate a research question or pursuit. If the faculty advisor is not in the Department of Landscape Architecture, select a co-advisor from the department to ensure that the research is consistent with the field.
- 2. Submit a completed application and proposal (approved by the honors project supervisor and the chair of the research honors committee) no later than the end of the fourth week of the first semester of the senior year. Earlier submissions are encouraged. These will be reviewed by two ad hoc committee members, and successful thesis proposals will be submitted to the college honors committee by the sixth week.
- 3. Carry out an independent research effort that is original and separate from the work of others who may be investigating similar subjects.
- 4. Submit an outline of the thesis to the chair of the committee by the end of January for a May graduation.
- 5. Submit a draft to the readers by April 15. Describe and summarize the work within the range of formats used in the master's thesis program or professional journals in design or research. This version will be reviewed by the faculty supervisor and two ad hoc reviewers, and the student will be able to incorporate the committee's comments and suggestions into the final version, which will be due the last day of classes. Referees prepare a recommendation to the honors committee chair regarding the acceptability of the honors thesis.
- 6. Give one oral presentation to the group of other honors research students and invited faculty members. Both presentations are during the student's senior year.
- Send one bound copy of the completed and defended thesis to the honors committee chair by May 13 or another date provided by CALS, whichever is sooner.
- 8. Students may choose to publish their original honors research at eCommons Cornell University Library, as long as doing so does not interfere with other plans, such as patenting or publishing in a professional journal. A permission form to allow a thesis to be made available online at Mann Library can be obtained from the honors committee chair.

Nutritional Sciences, within the Division of Nutritional Sciences

Honors Program in the Division of Nutritional Sciences (DNS) is designed to challenge research-oriented DNS majors (NS, HBHS, and GPHS) with strong academic records. Students may conduct Honors research within or outside DNS. The Honors Program is a structured research-based experience that focuses and builds on a student's ongoing research, and involves four general components:

- NS 3980, an introductory course in research (fall junior year for spring graduates)
- Successful application to the DNS Honors Program (spring of junior year for spring graduates, fall of junior year for fall graduates)
- A multi-semester independent research project, mentored by a faculty PI (final 3+ semesters)
- Completion of a written thesis that reports the research (final two semesters)
- Oral presentation of research at the DNS Undergraduate Honors Symposium (final semester)

Interested DNS majors should visit the DNS Honors Program page (https://www.human.cornell.edu/dns/academics/undergraduate/ honors/) to review detailed eligibility requirements, application procedures, submission requirements and assignment descriptions, deadlines, and recent Honors theses.

Many DNS majors participate in research through independent study or employment, with or without applying to the DNS Honors Program. Read more about getting involved in undergraduate research (https:// www.human.cornell.edu/dns/academics/undergraduate/research/) and about DNS faculty research (https://www.human.cornell.edu/dns/ research/).

Physical Sciences

The research honors program in physical sciences provides outstanding students with an opportunity to do independent research under the supervision of a faculty member in the Departments of Biological and Environmental Engineering, Food Science, Earth and Atmospheric Sciences, or Biological Statistics and Computational Biology.

Application Requirements and Procedures

In addition to meeting the requirements of the college, the student is expected to:

- 1. Identify a thesis advisor and thesis topic before the end of the junior year.
- Work with the thesis advisor to prepare a budget, short research proposal (2–3 pages), and application form. These materials must be received by the Physical Sciences committee chair by the end of the third week of senior year.
- 3. Enroll in the program for a minimum of two semesters.
- 4. Enroll in the appropriate departmental undergraduate research course for a total of at least 6 credits.
- 5. Submit an outline of the thesis to the chair of the committee by the end of January (for a May graduation).
- Submit a draft of the thesis to the thesis advisor with sufficient leadtime for a revision to be prepared.
- Submit three copies of the thesis and names of recommended reviewers to the chair of the honors committee by four weeks before the end of classes in the semester in which graduation is expected.
- 8. Student should make the proper arrangements with their department for an oral or poster presentation of the thesis.
- 9. Students may volunteer to publish their original honors research at eCommons Cornell University Library, as long as doing so does not interfere with other plans, such as patenting or publishing in a professional journal. A permission form to allow a thesis to be made

available online at Mann Library can be obtained from the honors committee chair.

There is no required format, but the thesis is usually written in the form of a research journal article or a master's thesis.

Further details of the program can be obtained from the chair of the Physical Sciences Research Honors Committee.

Plant Sciences

The Research Honors Program in Plant Sciences is designed for students interested in seeking advanced training in laboratory or field research through completion of an original research project under the guidance of a faculty member in the School of Integrative Plant Science (SIPS). The breadth and diversity of research interests of SIPS faculty provide students a valuable opportunity to engage in basic and applied research to be well-positioned to pursue career goals. Students may also work with faculty in any department at Cornell as long as the research topic deals with plants.

Honors Program Requirements and Procedures

Students interested in enrolling in the Research Honors Program in Plant Sciences must:

- Meet college requirements (https://cals.cornell.edu/undergraduatestudents/undergraduate-student-research/research-honors/honorsprogram-requirements/)
- Have an overall GPA of at least 3.0
- By the first semester of the junior year, discuss your interests in the program with your academic advisor and with potential faculty research mentors. Become engaged in research.
- By the second semester of the junior year, initiate an independent research project with a faculty research supervisor who will guide and approve the thesis work (recommended: complete PLSCI 4990 Independent Undergraduate Research in Plant Science)
- In the first semester of the senior year, attend the information session for new applicants. For the Fall semester, it will be in the week after Labor Day. Contact the research honors committee chair, Dr. Teresa Pawlowska (tep8@cornell.edu), for the time and place.
- In the first semester of the senior year, submit your application, as described below. The deadline for receipt of the application will be the sixth Thursday of the semester.

Application Procedures

Application involves a two-step procedure:

- 1. Submit the following documents via email to the committee chair, Dr. Teresa Pawlowska (tep8@cornell.edu):
 - a. Research description (3-6 pages, single space, font 12) that should include:
 - i. Title of research project, your name, and name of research supervisor
 - ii. Statement of objectives and significance
 - iii. Brief overview of literature
 - iv. Experimental procedures
 - v. Research accomplished to date
 - vi. Literature cited
 - b. Signed honors thesis supervisor agreement. Contact Dr. Pawlowska (tep8@cornell.edu), for a copy. Supervisors must agree to mentor your project, provide necessary facilities and supplies, and work with you toward a successful completion of your thesis.

- c. Your application will be reviewed by two or more members of the Plant Science Honors Committee, or other faculty members with expertise in your area of research.
- Upon approval of your application at Step 1, you will be asked to submit your application to CALS Research Honors at the Experience Cornell website (https://experience.cornell.edu/opportunities/calsresearch-honors/).

Honors Degree Requirements

Honors candidates are encouraged to enroll and obtain credit each semester in PLSCI 4990 Independent Undergraduate Research in Plant Science under the direction of the faculty member acting as the honors supervisor, although the program does not have a specific credit requirement.

Students accepted into the Plant Sciences Honors Program must complete the following in order to graduate with Distinction in Research:

- Enroll in PLSCI 4950 Senior Seminar in Plant Sciences and present research findings at the SIPS Senior Symposium (end of the spring semester of the senior year).
- Plant Sciences Honors graduates are encouraged to present their work at the Cornell Undergraduate Research Board Spring Forum [CURB] near the end of each semester. (See: cornellcurb.edu (https:// catalog.cornell.edu/agriculture-life-sciences/cornellcurb.com)).
- Submit honors thesis by the scheduled deadline near the end of your senior year [thesis should be submitted electronically to the committee chair (tep8@cornell.edu).]
 - Your thesis will be reviewed by faculty who will recommend revisions and provide professional feedback.
- Students encouraged to publish their original research in co-authored peer-reviewed journals with their supervisor and collaborators. In addition, students are encouraged to publish their thesis at eCommons, Cornell University Library.

Social Sciences

This thesis program is open to students in CALS who work in a set of social science related fields (including applied economics and management, global development, international agriculture and rural development, biometry and statistics, and information science). The program provides an excellent opportunity for students to pursue independent study and research under the guidance/mentorship of a faculty member. Students are strongly encouraged to meet with faculty during their junior year in order to identify someone to serve as their honors thesis advisor. Honors thesis faculty advisors must be members of the graduate faculty. Exceptions may be granted for persons with special expertise pending petition to the committee. Previously approved theses covered a wide range of topics and methodologies. A complete list can be found at the Cornell library eCommons website (https://ecommons.cornell.edu/collections/7e16c7f3-5201-4b37a2fa-2ad45a613cc2/).

Students are accepted into the social sciences research honors program (https://ecommons.cornell.edu/collections/7e16c7f3-5201-4b37a2fa-2ad45a613cc2/) of the College of Agriculture and Life Sciences after meeting all the college criteria, after evaluation of the student's written application, and on approval of a detailed thesis proposal by the Social Science Honors Committee.

Guidelines and Due Dates A. Application and Proposal: Students must submit by email a copy of the completed application and proposal to the social science program area faculty committee chair (Dr. Tom Hirschl (tah4@cornell.edu)) as well as a letter of support from their advisor, confirming their ability to oversee the thesis (see application deadlines below). Late applications will not be considered.

Application timeline & dates

- Junior year. Students are strongly encouraged to meet with faculty during their junior year in order to identify someone to serve as their honors thesis advisor. Honors thesis faculty advisors must be members of the graduate faculty. Exceptions may be granted for persons with special expertise pending petition to the committee.
- For May graduates, the proposal is due the 3rd Friday of September to the Social Science Undergraduate Program Coordinator. (For December graduates, the proposal will be due the 3rd Friday of February of the Spring semester.)
- The thesis is due the 3rd Friday of April the Spring semester to the Social Science Undergraduate Program Coordinator. (For December graduates, the proposal will be due the 3rd Friday of November in the Fall semester.)

May Graduate Timeline

Proposal Details

Working with their honors thesis advisor, students should begin developing their thesis proposals during the second semester of junior year. The purpose of the proposal is twofold. First, it formalizes a plan of study and establishes a set of expectations between the student and the faculty advisor. Second, the honors committee reviews the proposal to determine whether it is consistent with honors thesis requirements and to make suggestions for improvement. Students accepted into the honors program may register for credit directed by the honors thesis faculty advisor (e.g., AEM 4990 Undergraduate Research, COMM 4990 Independent Research, EDUC 4990 Undergraduate Research, GDEV 4990 Independent Research in Global Development).

The proposal should be 5 to 10 typed, double-spaced pages and include the following:

- Research Topic: State the problem to be studied or the topic of interest. Review the basic literature and the background of the problem or topic; include a more extensive bibliography to be consulted.
- 2. Research Questions/Empirical Hypotheses: Specify the proposed questions to be answered or hypotheses to be tested empirically via collection of data and a mode of analysis accepted in the social sciences.
- 3. Research Methods: Discuss the models to be constructed (if any), sampling procedures, data collection procedures (including measurement instruments and survey or experimental designs, if appropriate), and proposed methods of analysis.
- 4. Expected Significance: State what new knowledge or information is likely to be forthcoming and why it is important. State any practical applications expected as a result of the research.
- 5. Research Timeline: Provide a brief chronological plan for how you will complete your project by the April deadline. This is intended to help you think about how to plan your workload to complete the project by mid-April. In this section, you need to think about data collection and access issues (especially for students collecting their own data/those that will require Institutional Review Board approval. See more details here: https://www.irb.cornell.edu/faq/#gq3 (https://

researchservices.cornell.edu/resources/irb-faqs/#gq3)). You also should set targets for delivering drafts/updates to your advisor.

6. Attached to your proposal, you need to include a letter signed by your advisor confirming their ability to oversee your project and confirming that you have jointly agreed upon the application and timeline.

Honors Degree Requirements

B. Final Submission for Review and Approval Requirements:

Honors theses should be written in accordance with the formatting required for any standard journal within the appropriate field. Distinction in research is awarded upon approval of the research honors thesis by the committee. Both the results of the research and the methodology (or the logical argument by which the results were achieved) must be reported. Reviews of the literature, practical conclusions or applications, or broad characterizations of an area of inquiry may constitute part of the research report but are not themselves sufficient as research.

The committee recommends the submission of the thesis draft to the research advisor two months before graduation to permit sufficient time for revision.

Completed theses are due approximately one month before graduation, on the third Friday of April:

May Graduate Timeline

One electronic copy of the final thesis (in pdf or Word format) should be sent by email to the Social Sciences program area faculty committee chair no later than the due date. A supporting letter from the faculty member supervising the work must be submitted either electronically or as a hard copy.

The thesis will be independently reviewed typically by the faculty committee members, and external reviewers where appropriate, within about two weeks. If further revisions are required, students will be informed and a revised draft will be requested.

Students may volunteer to publish their final, approved thesis at eCommons Cornell University Library, as long as doing so does not interfere with other plans, such as patenting or publishing in a professional journal. A permission form to allow a thesis to be made available online at Mann Library can be obtained from the honors committee chair.

We also recommend students to consult the following resources as they prepare their thesis drafts:

- Recognizing and Avoiding Plagiarism (http:// plagiarism.arts.cornell.edu/tutorial/)
- APA style manual (http://https://apastyle.apa.org/)

Off-Campus Opportunities

There are two approved channels for credit-bearing off-campus study:

- Credit earned through an approved, accredited university or study abroad program administered through the Office of Global Learning.
- · Credit earned in Cornell courses that require off-campus activity.

Students who plan to enroll in courses at another institution should refer to the non-Cornell (transfer) credit policies (https://cals.cornell.edu/ undergraduate-students/cals-student-services/academic-resources/ transfer-credit/).

Study Abroad and Other International Opportunities

Students attending Cornell Global Programs during the fall or spring semester must:

- · be a registered, full-time student;
- be in good academic standing and have a cumulative GPA of 2.75 or above. Some programs may require a minimum of 3.0 GPA or higher;
- · Be able to study abroad and graduate on time;
- · apply by the stated deadlines;
- apply for an approved program through the Office of Global Learning (https://abroad.globallearning.cornell.edu/). Students may petition (https://abroad.globallearning.cornell.edu/get-started/academics/ petition/) to receive a one-time recognition and permission to attend a non-approved university or study abroad program. There is no guarantee of an approval and all petitions will go through a review process by both the Office of Global Learning and CALS. Credit is not awarded retroactively after a return from a leave of absence during which you may have studied abroad independently;
- receive approval on the "CALS Study Abroad Participation and Course Approval Form" from their faculty advisor and/or designated department coordinator, and CALS Office of Student Services.

Programs Must:

- be a "CALS-approved" accredited university or study abroad program offered through the Office of Global Learning. Search the Experience Cornell (https://experience.cornell.edu/opportunities/? combine=&op=Search): select "Global" under Category, and "Agriculture and Life Sciences" under the College/School filter on the left side of the screen in order to view CALS-approved opportunities;
- be an approved accredited university or study abroad program by both the Office of Global Learning and CALS that has been given onetime recognition status through the official petition process (https:// abroad.globallearning.cornell.edu/get-started/academics/petition/).

Credits earned through Office of Global Learning Fall and Spring programs do not count towards the 60 maximum transfer credits permitted; credits are limited to 15 credits per semester, 30 per academic year.

External Transfer students are able to participate in the same study abroad opportunities as all CALS students. For students with 45 or fewer transfer credits, studying abroad for a semester can fit into a Cornell degree quite seamlessly. However, students with more than 45 transfer credits should discuss their individual situation with a CALS study abroad advisor.

CALS Global Fellows Program

The CALS Global Fellows Program (https://experience.cornell.edu/ opportunities/?combine=cals+global+fellows&op=Search) supports CALS undergraduate students from any CALS major in pursuit of challenging, professionally focused summer internships and research placements that enhance and complement their career goals and academic progress while enriching their undergraduate experience with diverse cultural and international immersion. Through key partnerships, the Global Fellows Program provides a platform for students to make positive and definable contributions to global organizations and communities.

Acceptance to the program is competitive and a limited number of students are selected each year.

More information regarding specific placement opportunities, eligibility, and how to apply can be found online (https://experience.cornell.edu/ opportunities/?combine=global+fellows&op=Search).

Capital Semester

Capital Semester offers the unique opportunity to help students explore careers in public service, public policy, politics, and government. Students intern directly for a Member of the New York State Assembly or New York State Senate in Albany. These programs are offered during the spring semester and are open to sophomores, juniors, and seniors. Policy interests may include, but are not limited to: Health Care; Environment; Agriculture; Energy; Science and Technology; Crime, Incarceration, and Justice; Social Sciences; Human Rights; Children and Families; Education; Taxation and Economic Policy; Labor; and Urban Planning.

This program offers a paid internship (stipend) in the New York State Legislature, earning a full semester of credits (12 credits).

As part of either the Senate or Assembly, students learn through direct experience and formal instruction how the New York State Legislature functions. The Capital Semester Internship Program offers students a type of real-world experience. For full program details go to the Experience Cornell Pages (https://experience.cornell.edu/) for NYS Assembly or NYS Senate. Contact Zoe Nelson before applying at zmn2@cornell.edu.

Ithaca College Exchange Programs Policies Overview

The Cornell University–Ithaca College (https://sce.cornell.edu/courses/ register/credit/cu-ic-exchange/) Local Exchange Program allows matriculated full-time Cornell students, with prior approval and within stated stipulations, to cross-register at the other institution only during the fall and spring academic semesters.

Policies

- 1. As an Ithaca College exchange program participant, the student must pay for full-time status at Cornell University (12 or more credits for undergraduate students
- Ithaca College Exchange credits will be treated as non-Cornell (transfer) credits (https://cals.cornell.edu/undergraduate-students/ cals-student-services/academic-resources/) and reflected on the Cornell transcript.
- 3. Cornell students can register only for Ithaca College courses applicable to their program that do not duplicate Cornell courses.
- A student may only take courses not offered at their home institution. (Schedule conflicts or unavailability of courses in a given semester do not constitute valid rationales for enrollment as an exchange student.)
- 5. The School of Continuing Education website (http://sce.cornell.edu/ courses/register/credit/cu-ic-exchange/) provides more information for those interested in this program.

Only Division of Nutritional Sciences undergraduate majors may complete courses at Ithaca College for the Applied Exercise Science minor (https://www.human.cornell.edu/dns/ academics/undergraduateminors/appliedexercise/). Contact dnsstudentservices@cornell.edu for further information.

Brooks School Cornell in Washington DC Connect Program

Cornell in Washington DC Connect is a spring semester or summer program in the heart of Washington, D.C., our nation's capital. This unique experience offers students in all colleges an opportunity to earn full academic credit for the spring semester or summer. Students take part in small courses led by Cornell faculty, and gain work experience through an internship of their choosing, while living in the Brooks School's residence hall near Dupont Circle. Learn more about the Cornell in Washington DC Connect.

Shoals Marine Laboratory (SML)

Cornell's Shoals Marine Lab is the country's largest undergraduatefocused marine field station, offering summer courses on Appledore Island, Gulf of Maine. Students from any major can focus on coastal field work and experiential learning while living on the island. Courses could meet major and college distribution requirements. Financial aid and scholarships are available. Please refer to the Shoals Marine Laboratory (SML) (https://www.shoalsmarinelaboratory.org/academics/ undergraduate/) website for more information.

Shoals Summer Semester

The Shoals Semester program offers students a chance to apply their Cornell financial aid package toward a summer semester at the Shoals Marine Laboratory (SML). Participation in the Shoals Summer Semester will require students to accelerate their undergraduate program at Cornell by accumulating a full semester's worth of credits (12 or more) over the summer at SML. Students who complete a Shoals Semester must opt to graduate early or replace a regular fall or spring semester with a voluntary leave of absence. This option is especially useful for students in the Marine Biology major concentration or minor. For more information, contact Academic Coordinator, Dr. Eugene Won for advising and the required steps to apply.

Eligibility requirements for College Approval:

- 1. Students must have a minimum cumulative GPA of 3.0
- 2. Be in good academic standing
- 3. Complete the application form with Dr. Won

Special Studies

Several departments in the college offer independent study (4970), teaching assistantships (4980), and undergraduate research (4990) for academic credit. To ensure a fair and manageable system to deal with these specialty courses, the College of Agriculture and Life Sciences has set forth guidelines to serve as minimum requirements for a student to receive credit.

- A Cornell CALS faculty member is directly involved in determining both the course content and in evaluating the student's work. The experience should be purposeful, provide opportunities for reflection, present a continual challenge to the student, and incorporate active learning, with the student an active participant in all stages of the experience from planning to evaluation.
- Before a student begins the independent study, research, or teaching assistantship:
 - A learning contract should be written between the Cornell CALS faculty member responsible for grading and the student.
 - This contract should state the conditions of the work, assignments, supervision, learning goals, number of credits and methods of evaluation of the work.
 - Credit hours should be determined in accordance with Cornell's credit hour policy and based upon number of hours of work per week.
- Special Studies Research, Teaching, and Independent Study requests are submitted electronically. More information is available on the CALS website (https://cals.cornell.edu/undergraduate-students/cals-student-services/academic-resources/cals-special-studies-academic-

policies-and-petitions-academic-policies/undergraduate-specialstudies-enrollment-non-structured-credit/).

- Some departments may have their own form and/or course numbers.
- Evaluation: Credit will only be assigned or accepted in cases where a Cornell faculty member is directly involved in determining both the special studies course content and in evaluating the student's work.
- Progress Updates: Students must keep the CALS faculty member responsible for grading updated on the progress of the special study.
- Individual departments may add more requirements (including additional forms to complete) to the special study based on specific needs such as time constraints, faculty workloads, and the relationship of the special study to the goals of the department.
- Students should further develop the experience based on the college Experiential Learning Criteria.

Internships

Several departments in the college offer supervised internships (4960) for academic credit. Academic credit isn't awarded for the internship, rather the work (presentation/paper/project) conducted during the following fall or spring term in the special studies class. Students should consult with their major department prior to the start of an internship if they want credit. Internship Guidelines must be reviewed and can be found on the CALS website under Internship (https://cals.cornell.edu/ undergraduate-students/cals-student-services/career-development/ undergraduate-internship-guidelines/). Credit will not be awarded for internships completed prior to matriculation.

- Special Studies Internship requests are submitted electronically. More information is available on the CALS website (https:// cals.cornell.edu/undergraduate-students/cals-student-services/ academic-resources/transfer-credit/).
- Individual departments may add more requirements (including additional forms to complete) to the internship based on specific needs such as time constraints, faculty workloads, and the relationship of the internship to the goals of the department.

Pay and Credit for Undergraduate Research, Teaching, and Internships

Undergraduate Research: students can receive pay or credit, but not both.

Undergraduate Teaching Assistant: students can receive pay or credit, but not both.

Internships:

Students may receive both pay and credit for the same internship experience and receive credit for the academic component of the same experience.

Double Majors in CALS

Students are admitted into a single major. Completion of one (1) major is required for graduation. Some students may choose to complete more than one (1) major. Completed majors are posted on the official transcript. Students are not permitted to extend their studies beyond eight semesters (or the equivalent) in order to complete additional majors or minors.

Students interested in declaring an additional major can find more information on the CALS website (https://cals.cornell.edu/ undergraduate-students/major-changes-and-double-major/doublemajors/). Students who pursue an additional major must choose a major that is available within the College of Agriculture and Life Sciences.

- Double majors across colleges are not permitted. For example, students may not double major in CALS Biological Engineering or Environmental Engineering and any other Engineering major.
- Students majoring in CALS Landscape Architecture may find it challenging to double major within CALS. Due to the studio-based nature of the Landscape Architecture curriculum, no more than twelve (12) credits typically electives are expected to overlap with another CALS major.
- Similarly, students majoring in CALS Biological Engineering or Environmental Engineering may find it difficult to double major within CALS. The specialized nature of engineering coursework means that no more than 12 credits - generally electives - are likely to overlap with another CALS major.

CALS Graduation Requirements for the Bachelor of Science

Students are responsible for understanding and fulfilling all the requirements necessary for graduation. Additionally, students must promptly notify the college of any discrepancies or issues with their academic records.

CALS undergraduate students follow college distribution requirements corresponding to their matriculation/entry term and class standing. Students matriculating/entering before Fall 2025 will complete the existing CALS distribution requirements. First-year students matriculating/entering Fall 2025 or later will be subject to the new CALS 2025+ distribution requirements. However, sophomore and junior transfer students matriculating/entering in Fall 2025 will follow the existing CALS distribution requirement to align with students in their corresponding cohort year. All students must adhere to the requirements designated for their matriculation/entry term and class standing. *There are no exceptions to this policy.*

Although specific requirements vary between the curriculums, all students must complete the following Graduation Requirements to earn the Bachelor of Science degree:

- 1. University Graduation Requirements
- 2. Credit Requirements
- 3. Distribution Requirements
- 4. Residency Requirement
- 5. GPA Requirement
- 6. Major Requirements
- 7. Application to Graduate

Credit Requirement Policies

- 1. Minimum total credits: 120 academic credits are required for graduation.
 - Important Exceptions:
 - Repeated Cornell courses that do not allow repeat for credit will not count towards the number of credits required for graduation. These credits do count toward the minimum twelve (12) credits required for full-time status and good academic standing.
 - Forbidden Overlaps will not count towards credits required for graduation. These credits do count toward the minimum twelve (12) credits required for full-time status and good

academic standing. More information can be found under the Course Enrollment and Credits page.

- Review or supplemental courses (e.g., 1000- to 1099-level) do not count towards the number of credits required for graduation. These credits do not count toward the minimum twelve (12) credits required for full-time status or good academic standing.
- Physical Education courses do not count toward the required 120 credits for graduation. They also do not count toward the minimum twelve (12) credits required for full-time status or good academic standing.
- Minimum Credits at Cornell: Sixty (60) academic credits must be completed at Cornell (includes Cornell in Rome, Capital Semester, and Brooks School Cornell in Washington DC Connect Program, and Shoals Marine Laboratory).
- 3. Maximum Non-Cornell Credits: Sixty (60) non-Cornell credits (AP, CASE, IB, GCE, French Baccalauréat, Cambridge Pre-University, and external transfer coursework) can be applied toward degree requirements. A student can transfer in a maximum of fifteen (15) academic credits earned before matriculation as a first-year student at any accredited college/university (AP, CASE, IB, GCE, French Baccalauréat, and external transfer credits). Refer to Non-Cornell (Transfer) Credit under Policies and Procedures for additional information.
- All CALS students are required to fulfill a minimum number of CALS Credits, structured credits, and letter-graded credits. Specific policies are in the curriculum sections below.

Residency Requirements

- Eight (8) semesters of full-time study are expected. External transfer students are credited with one (1) semester in residence for each full-time semester (or equivalent) completed at another accredited institution prior to matriculation at Cornell.
- Internal transfer students must complete two (2) semesters in residence in CALS.
- The final semester before graduation must be completed in a Cornell program as a full-time student. Summer or winter semesters cannot be counted as a final semester. (The School of Continuing Education does not count towards a final semester in residency.)
- Students in the ninth (9th) (or equivalent) and final semester may be eligible to apply for prorated tuition. The eligibility criteria are listed online (https://cals.cornell.edu/undergraduate-students/cals-studentservices/degree-advising/cals-graduation-requirements-for-bachelorof-science/).
- The following programs are in residency: Cornell in Washington DC Connect Program (Fall or Spring only), Capital Semester, Shoals Summer Semester.

Grade Point Average (GPA) Requirements

Minimum cumulative GPA: 2.00 or above must be maintained. Students must earn a minimum cumulative GPA of 2.00 or better to graduate. The cumulative GPA includes all letter grades earned at Cornell.

CALS Degree Requirements Prior to 2025 (applies to Transfers entering Fall 2025)

These requirements apply to: First-year students who matriculated before Fall 2025, sophomore transfers who matriculate prior to Fall 2026, and junior transfers who matriculate before Fall 2027. All students must follow the requirements based on their matriculation and expected graduation dates. *There are no exceptions to this policy.*

Students are required to fulfill:

- 1. University Graduation Requirements:
 - a. Physical Education.
 - b. Swim Requirement.
- 2. Credit Requirements: 120 academic credits, of which a minimum of fifty-five (55) must be taken from the College of Agriculture and Life Sciences at Cornell. A minimum of one hundred (100) credits must be in courses for which a letter grade was received. PE and supplemental courses do not count as academic credit.
 - a. Fifty-five (55) CALS Credits are required for graduation. CALS Credits consist of courses offered within CALS and in Applied Economics and Management, Biological Sciences, Biology & Society, Earth and Atmospheric Sciences, Environment and Sustainability, Information Science, Nutritional Science, and the Department of Statistics and Data Science. CALS Credits include all courses with the following subjects: AGSCI, AIISP, ALS, AEM, ANSC, BEE, BIOG, BIOAP, BIOCB, BIOEE, BIOMG, BIOMI, BIOMS, BIONB, BIOSM, BSOC, BTRY, COMM, DSOC, EAS, EDUC, ENTOM, ENVS, FDSC, GDEV, IARD, INFO, LA, LEAD, NS, NTRES, PLBIO, PLBRG, PLHRT, PLPPM, PLSCI, PLSCS, STSCI, VIEN.
 - b. Minimum Letter-Graded Credits: One hundred (100) credits.
 Proration of letter-graded credits may be applicable to students that transfer non-Cornell credits (see Proration Chart for non-Cornell credit (https://experience.cornell.edu/sites/default/files/ resource-files/Proration%20Chart%20for%20Students%20with %20Non%20Cornell%20Credit.pdf)).
 - c. Maximum Credits earned through Special Studies (Independent Study, Research, Teaching Assistantships, and/or Internships): Fifteen (15) credits of "unstructured" coursework can be applied towards graduation requirements. Proration of structured credits may be applicable to students that transfer non-Cornell credits (see Proration Chart for non-Cornell credit (https:// experience.cornell.edu/sites/default/files/resource-files/Proration %20Chart%20for%20Students%20with%20Non%20Cornell %20Credit.pdf)).
- 3. Residency: Eight (8) semesters of full-time study are expected. External transfer students are credited with one (1) semester of residence for each full-time semester (or equivalent) completed at another accredited institution prior to matriculating at Cornell.
- 4. GPA: Students must earn a minimum cumulative GPA of 2.00 or better to graduate. The cumulative GPA includes all letter grades earned at Cornell.
- Physical and Life Sciences: Eighteen (18) credits, of which six (6) credits must be Introductory Life Sciences/Biology and three (3) credits must be Chemistry or Physics.
- 6. Quantitative Literacy: Faculty legislation requires minimum competency in quantitative literacy. This requirement can be satisfied by taking an approved calculus or statistics class.
- Social Science and Humanities: Students must complete four (4) courses within the seven (7) categories of Humanities and Social Sciences. The courses MUST span at least three (3) different categories. Human Diversity (D) is a required category. Humanities courses must be a minimum of three (3) credits.
- Written and Oral Expression: Nine (9) credits total, of which at least six (6) must be in Written Expression. Oral Expression is not required by the college but may be required for some majors. If Oral

Expression is not required by the major, all nine credits may be in Written Expression.

- 9. Major. See individual department listings for major requirements.
- Application to Graduate: See Graduation Resources (https:// cals.cornell.edu/undergraduate-students/cals-student-services/ graduation-resources/).

Distribution Requirements

The purpose of the distribution requirement is to have all students achieve common learning outcomes. It is expected that through college and major course requirements graduates will be able to:

- Explain, evaluate, and effectively interpret factual claims, theories, and assumptions in the student's discipline(s) (especially in one or more of the college's priority areas of Food & Energy Systems, Social Sciences, Life Sciences, and Environmental Sciences) and more broadly in the sciences and humanities.
- · Find, access, critically evaluate, and ethically use information.
- Integrate quantitative and qualitative information to reach defensible and creative conclusions.
- Communicate effectively through writing, speech, and visual information.
- · Articulate the views of people with diverse perspectives.
- Demonstrate the capability to work both independently and in cooperation with others.

Through the study of Physical and Life Sciences, students develop their understanding and appreciation of the physical sciences, enhance their quantitative reasoning skills, and gain an appreciation of the variability of living organisms. Social Sciences and Humanities gives students perspective on the structure and values of the society in which we live and prepares them to make decisions on ethical issues that will affect their work and role in society. Written and Oral Expression is designed to help students become competent and confident in the use of oral and written communication to express themselves and their ideas.

Important Notes:

- Credits received for independent study, fieldwork, teaching, research, work experience, and internships cannot be used to fulfill the distribution requirements
- Review or supplemental courses, such as 1000- to 1099-level courses, will not be counted in the distribution areas.
- First-Year Writing Seminars (FWS) cannot be used to satisfy the Physical and Life Sciences distribution area.
- Courses that fulfill distributions are approved by the CALS Curriculum Committee. Distributions cannot be applied to a course retroactively, and individual student petitions for Cornell courses to fulfill distributions will not be accepted. Students may request a review of external transfer courses for fulfilling distribution requirements.

Physical and Life Sciences:

Eighteen (18) credits, of which six (6) credits must be Introductory Life Sciences/Biology and three (3) credits in Chemistry or Physics. Courses that count for Introductory Life Sciences/ Biology, Chemistry/Physics, Quantitative Literacy, and Other Physical and Life Sciences count towards the eighteen (18) credits for this requirement

Introductory Life Sciences/Biology Requirement (BIO-AG):

Students must complete at least six (6) academic credits of Introductory Life Sciences/Biology. Courses that count towards this requirement have

the BIO-AG distribution attribute. Note: CALS does NOT accept BIO-AS for BIO-AG.

Offerings in the area provide a foundation in the field of biology. Courses must include: an evolutionary component, instruction on applying the process of science and a significant student-centered teaching component.

Chemistry/Physics (CHPH-AG):

Students must complete a minimum of three (3) credits of Chemistry or Physics. Includes all Cornell courses with the CHEM or PHYS prefix (excluding courses that are supplemental, independent study, research, TA, internship, and First-Year Writing Seminar). Courses that count towards this requirement have a CHPH-AG distribution attribute. Additionally, courses with the prefix CHEM or PHYS of at least 11xx numbering and a minimum of three (3) credits are accepted as fulfilling CHPH-AG.

Courses that meet the CALS Chemistry or Physics (CHPH) requirement provide students with a foundational understanding of key scientific principles. These courses delve into the study of chemistry (focusing on the composition, properties, and transformations of substances) or physics (exploring the principles of matter, energy, and their interactions). Fulfilling this requirement equips students with essential scientific knowledge that supports practical and innovative applications in fields like agriculture, environmental science, and food science, thereby fostering their ability to address and solve critical challenges within these domains.

Quantitative Literacy (MQL-AG):

Students must complete one (1) Quantitative Literacy course. Courses that count towards these requirements have an MQL-AG distribution attribute. Additionally, courses of at least 11xx numbering with the MATH prefix may fulfill this category. Calculus courses and Introductory Statistics courses may also fulfill MQL-AG.

Faculty legislation requires minimum competency in quantitative literacy. Courses that fulfill the Mathematics and Quantitative Literacy distribution in CALS enhance students' problem-solving skills by teaching them to understand abstract, logical relationships. These classes focus on the mathematical analysis of data, modeling natural and man-made systems, and developing algorithms critical for computation. Students will learn various quantitative methods and how to apply quantitative reasoning across different fields.

This requirement can also be satisfied by earning a score of four (4) or five (5) on the AP Calculus exam or a score of five (5) on the AP Statistics exam, or transfer of an approved calculus or statistics course with a minimum letter grade of "C" or better.

Other Physical Life Sciences (OPHLS-AG):

Other Physical Life Sciences courses count towards the eighteen (18) credit total for the Physical and Life Sciences requirement. Courses that count towards this requirement have the OPHLS-AG distribution attribute. The number of OPHLS-AG courses taken will vary by student. Courses with the following distributions are also accepted for the CALS OPHLS-AG distribution: PBS-HE, BIO-AS, PHS,AS, SDS-AS. Additionally, any course with BIO-AG, CHPH-AG or MQL-AG may alternatively fulfill OPHLS-AG.

Offerings in this area explore additional physical and life science subjects as well as quantitative literacy (math) courses. Courses satisfying this requirement help students understand and appreciate the physical sciences, enhance quantitative reasoning skills, or explore the variability of living organisms.

Social Sciences and Humanities:

Students must complete four (4) courses within the seven (7) categories of Humanities and Social Sciences. The courses MUST span at least three (3) different categories. Human Diversity (D) is a required category. Humanities courses must be a minimum of three (3) credits.

No more than two (2) courses in the same department will be counted toward the distribution requirement. Social Sciences & Humanities Categories:

(Also refer to Distribution Requirement Codes (https:// catalog.cornell.edu/general-information/distribution-codes/))

Cultural Analysis (CA-AG)

These courses study human life in particular cultural contexts through interpretive analysis of individual behavior, discourse, and social practice. Topics include belief systems (science, medicine, religion), expressive arts and symbolic behavior (visual arts, performance, poetry, myth, narrative, ritual), identity (nationality, race, ethnicity, gender, sexuality), social groups and institutions (family, market, community), and power and politics (states, colonialism, inequality).

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling CA-AG: ALC-AS, ALC-HA, ALC-AAP, CA-HE, CA-AAP, GLC-AS

Foreign Language (FL-AG)

Foreign Language courses available for CALS students at Cornell are offered by several departments, including Africana Studies and Research Center (AS&RC - language courses only), Asian Studies with languages such as Bangla-Bengali, Burmese, Chinese, Hindi, Indonesian, Japanese, Khmer, Korean, Sanskrit, Tagalog, Thai, and Vietnamese, and Classics (CLASS - language courses only). Additional offerings are provided by German Studies, which includes German, Dutch, and Swedish (language courses only), Linguistics (LING - language courses only), Near Eastern Studies (NES - language courses only), Romance Studies with languages like Catalan, French, Italian, Portuguese, Quechua, and Spanish, and Russian Studies, covering Russian, Hungarian, Polish, Serbian/Croatian, and Ukrainian. CALS will recognize these Foreign Language (FL) classifications by any college at Cornell, provided the class is taken for three (3) or more credits. Transfer students may have non-Cornell courses that meet SUNY World Languages requirements and are a minimum of three (3) credits reviewed as fulfilling FL-AG.

Human Diversity (D-AG)

These courses analyze historical or contemporary marginalized communities and the culturally specific contexts that produce unequal power relations in terms of race, nationality, ethnicity, indigeneity, sexuality, disability, religion, gender, or economic status.

Definition of "marginalize": Any groups with reduced access to social status, political influence, economic advancement, educational advancement, healthcare, information, or any of the goods, services, and powers of a society can be considered "marginalized." Causes of marginalization may be related to ethnic status, religion, country of origin, sexual orientation, geography, economics, and government policies. Those who exist on the furthest margins of a society are frequently subject to several of these forces.

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling D-AG: SCD-AS, SCD-HA, D-HE.

Non-equated external transfer courses will only be considered for junior transfer students who have taken an appropriate course at their prior institution and whose schedule does not allow space to take a Human Diversity (D-AG) course at Cornell. These situations will be reviewed individually after a required appointment with CALS Student Services.

Historical Analysis (HA-AG)

These courses interpret continuities and changes—political, social, economic, diplomatic, religious, intellectual, artistic, scientific—through time. The focus may be on groups of people, dominant or subordinate, a specific country or region, an event, a process, or a time period.

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling HA-AG: HA-AAP, HST-AAP, HST-AS, HST-HA, HA-HE

Knowledge, Cognition, and Moral Reasoning (KCM-AG)

These courses investigate the bases of human knowledge in its broadest sense, ranging from cognitive faculties shared by humans and animals such as perception, to abstract reasoning, to the ability to form and justify moral judgments. Courses investigating the sources, structure, and limits of cognition may use the methodologies of science, cognitive psychology, linguistics, or philosophy. Courses focusing on moral reasoning explore ways of reflecting on ethical questions that concern the nature of justice, the good life, or human values in general.

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling KCM-AG: ETM-AAP, ETM-AS, ETM-HA, KCM-AAP, KCM-HE

Literature and the Arts (LA-AG)

These courses explore literature and the arts in two different but related ways. Some courses focus on the critical study of artworks and on their history, aesthetics, and theory. These courses develop skills of reading, observing, and hearing and encourage reflection on such experiences; many investigate the interplay among individual achievement, artistic tradition, and historical context. Other courses are devoted to the production and performance of artworks (in creative writing, performing arts, and media such as film and video). These courses emphasize the interaction among technical mastery, cognitive knowledge, and creative imagination.

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling LA-AG, ALC-AS, ALC-HA, ALC-AAP, LA-AAP

Social and Behavioral Analysis (SBA-AG)

These courses examine human life in its social context through the use of social scientific methods, often including hypothesis testing, scientific sampling techniques, and statistical analysis. Topics studied range from the thoughts, feelings, beliefs, and attitudes of individuals to interpersonal relations between individuals (e.g., in friendship, love, conflict) to larger social organizations (e.g., the family, society, religious or educational or civic institutions, the economy, government) to the relationships and conflicts among groups or individuals (e.g., discrimination, inequality, prejudice, stigmas, conflict resolution).

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling SBA-AG: SSC-AS, SBA-HE, SBA-AAP, SSC-AAP

Written and Oral Expression:

Nine (9) credits total, of which at least six (6) must be in Written Expression. Oral Expression is not required by the college but may be required for some majors. If Oral Expression is not required by the major, all nine (9) credits may be in Written Expression. Writing in the Majors (WIM) courses do not count towards Written Expression.

Written Expression (WRT-AG)

All students are required to take at least six (6) credits of Written Expression and may take nine (9) credits to fulfill the Written and Oral Expression requirement. Courses that fulfill the Written Expression requirement in CALS focus on enhancing students' writing skills. Courses meeting this requirement devote at least 50% of class time to writing proficiency, involve at least five (5) writing assignments with detailed feedback, and emphasize revision and development. These courses ensure personalized attention and help students articulate ideas clearly, argue effectively, and engage with evidence critically. This structure supports students in improving both their writing mechanics and their ability to communicate persuasively across contexts.

CALS also accepts FWS courses as fulfilling WRT-AG. Transfer students may have courses that meet the SUNY Writing Requirement considered to fulfill this requirement.

Oral Expression (ORL-AG)

Students may take one (1) Oral Expression course towards the nine (9) required credits for Written and Oral Expression. Courses that fulfill the CALS Oral Expression requirement enhance students' public speaking and communication skills. Courses meeting this requirement center on improving oral proficiency, dedicating over 50% of class time to the principles of effective communication. Each course involves at least five (5) formal oral presentations, with four (4) undergoing detailed revisions based on structured feedback that focuses on speech organization, clarity, evidence use, and delivery. These courses offer personalized guidance and encourage students to apply feedback to subsequent presentations. The aim is to refine students' abilities to articulate ideas persuasively and adapt messages for different contexts, ensuring they can communicate effectively on any topic.

CALS 2025+ Degree Requirements (applies to first-year students who start Fall 2025 or after)

The 2025+ CALS Curriculum applies to first-year students who enter CALS starting Fall 2025 and all semesters after. Transfer students entering Fall 2025 and all continuing students will follow the Prior to Fall 2025 Requirements. There are no exceptions to this policy.

All students are required to complete:

- 1. University Graduation Requirements
- 2. Credit Requirements
- 3. 120 Credits are required to graduate, of the 120:
 - A minimum seventy-five (75) must be CALS Credits (fifty-five (55) for transfer students).
 - A minimum of 105 must be structured academic credits (transfer courses can count towards this requirement).
 - A minimum of one hundred (100) letter-graded academic credits (transfer courses can count towards this requirement).
 - The following courses do not count towards the 120: PE course, courses numbered 1000-1099, forbidden overlap courses, and repeated courses (that do not allow repeats).
- 4. Residency Requirement
- 5. GPA Requirement
- 6. Distribution Requirements
- 7. E3 Learning Milestone

- 8. Major Requirements: See individual department listings for major requirements.
- 9. Application to Graduate: Information can be found on graduation webpage.

75 CALS Credits

Students are required to take seventy-five (75) CALS Credits. The following counts as CALS Credit:

- Any course with the following prefixes: AGSCI, AIIS, ALS, ANSC, BEE, BIOG, BIOAP, BIOCB, BIOEE, BIOMG, BIOMI, BIOMS, BIONB, BIOSM, BSOC, BTRY, COMM, EAS, EDUC, ENTOM, ENVS, FDSC, GDEV, INFO, LA, LEAD, NS, NTRES, PLSCI, STSCI, VIEN
- · Courses with the FWS attribute (two (2) courses maximum)
- · For BSBU students only: prefix AEM
 - AEM courses will not count towards the required seventy-five (75) CALS Credits, except for students who have officially been accepted to the AEM major. CALS students who choose to complete an AEM minor cannot count AEM courses towards their seventy-five (75) required CALS courses.

Students with matriculation status of Transfer will have a requirement of fifty-five (55) CALS Credits.

Distribution Requirements

The College of Agriculture and Life Sciences (CALS) college distribution requirements are the cornerstone of a diverse and comprehensive education.

These requirements encourage our students to venture beyond familiar subjects, develop a deeper understanding of others, uncover insights that can spark new interests, and pave the way toward meaningful careers that can shape a just and sustainable future.

The CALS distribution requirements consist of:

- A minimum of thirty-nine (39) credit hours of coursework.
- A single course may not fulfill more than one college distribution requirement. However, a single course can simultaneously fulfill college and major requirements.
- Students in CALS have the option to take some of these courses either for a grade or using S/U grading. However, letter grades may be required for some majors.
- Non-academic credit courses (numbered 1000-1099 and PE) do not fulfill distribution requirements. Special Topics Courses (numbered 4940) do not fulfill distribution requirements.
- Courses that fulfill distributions are approved by the CALS Curriculum Committee. Distributions cannot be applied to a course retroactively, and individual student petitions for Cornell courses to fulfill distributions will not be accepted. Students may request a review of external transfer courses for fulfilling distribution requirements.

Students must complete all of the following:

Agriculture, Food Systems & Human Nutrition (AFS-AG)

• Take one (1) Agriculture, Food Systems & Human Nutrition (AFS-AG) course.

The Agriculture, Food Systems & Human Nutrition distribution requirement at CALS emphasizes a comprehensive understanding of the food system, including production, processing, distribution, consumption, and waste, with a focus on the integration of these multiple components. Students must learn to describe, analyze, and understand the interdependent nature and the environmental and nutritional impacts of the food system. To fulfill the requirement, a course must cover at least two components of the food system, analyze their interactions, and dedicate at least half of its content to this holistic view, potentially including topics like agricultural history, food sustainability, and nutrition access.

Biological Sciences (BSC-AG)

 Take one (1) Biological Sciences (BSC-AG) course. Note: the following are NOT accepted as fulfilling BSC-AG: BIO-AG, BIO-AS.

Courses that meet the Biological Sciences requirement for CALS dedicate most of their content (at least 75%) to exploring one or more of the following biological concepts: evolution, structure and function, the flow, exchange and storage of information, pathways and transformations of energy and matter, or living systems. These courses include an evolutionary component, teach students how to apply scientific methods, and include at least one of the following competencies: quantitative reasoning, modeling and simulation, interdisciplinary thinking, interdisciplinary collaboration and communication, or science and society relational understanding. Courses also emphasize studentcentered learning activities such as labs, problem solving, case studies, research projects, or collaborative projects. Some courses within this distribution are identified as suitable for non-life sciences majors— these courses have no prerequisites and require only high school-level science knowledge.

Physical Sciences (PSC-AG)

• Take one (1) Physical Sciences (PSC-AG) course.

CALS Physical Sciences courses cover at least 75% of their content in fields such as chemistry, physics, earth science, atmospheric science, or astronomy, connecting theoretical knowledge to practical applications. Courses also emphasize student-centered learning activities such as labs, problem solving, case studies, research projects, or collaborative projects. Some courses within this distribution are identified as suitable for non-sciences majors - these courses have no prerequisites and require only high school-level science knowledge.

Sustainability Challenges (SCH-AG)

• Take one (1) Sustainability Challenges (SCH-AG) course.

Courses that satisfy the sustainability distribution requirement in CALS must allocate at least 30% of content or learning outcomes to examining the intricate interplay between economic, socio-political, and environmental aspects of sustainability issues or their solutions or to exploring the connections among three or more UN Sustainable Development Goals in relation to the main class topic. Additionally, the course must incorporate a learning outcome focused on one of three key proficiencies: systems thinking, decision-making amidst uncertainty, or understanding the factors that constrain sustainability, thereby ensuring students gain a comprehensive and interdisciplinary perspective on sustainability challenges.

Data Literacy (DLG-AG and DLS-AG)

Two required courses:

- Take one (1) course with attribute Data Literacy Statistics (DLS-AG).
- Take one (1) course with attribute Data Literacy General (DLG-AG) OR one (1) course with attribute Data Literacy Statistics (DLS-AG).

CALS courses fulfilling the Data Literacy General (DLG-AG) requirement are designed to teach students how to interpret and articulate insights

from both quantitative and qualitative data, with an emphasis on various competencies such as data analysis, acquisition methods, curation, and security. Students will be expected to understand the types of data, their applications, and the ethical implications of data misuse upon completion of these courses. The courses must dedicate a significant portion of content to at least three (3) specific data literacy competencies and include at least one of these competencies as a main learning outcome.

Courses that fulfill Data Literacy Statistics (DLS-AG) additionally provide explicit instruction on mathematical approaches to collection, description, analysis, and inference of conclusions from quantitative data. Course content focuses on the Data Manipulating & Analysis competency: Ability to draw conclusions from data with quantitative and/ or qualitative methods, which may include statistical or computational methods and may include tools like R, Python, Stata, Tableau, Unix, NVivo, QGIS, Excel, SPSS, etc.

Ethics (ETH-AG)

 Take one (1) course with attribute Ethics (ETH-AG). Note the following are NOT accepted as fulfilling ETH-AG: KCM-AG, ETM-AAP, ETM-AS, ETM-HA, KCM-AAP, KCM-HE.

Courses that fulfill the CALS Ethics requirement are designed to immerse students in the study of ethical principles impacting various facets of life, including personal, social, and global spheres, as well as in research and professional practices. These courses aim for students to critically engage with their values, understand diverse ethical perspectives, and articulate reasoned ethical positions. To satisfy the Ethics requirement, a course must devote over half of its content to ethical issues relevant to its main topic, incorporate historical or modern ethical debates, foster personal ethical reflection, and include specific learning outcomes focused on ethics.

Human Diversity (D-AG)

• Take one (1) course with attribute Human Diversity (D-AG).

CALS Human Diversity courses foster a comprehensive understanding of the complexities surrounding historically or contemporarily marginalized communities, emphasizing the critical analysis of unequal power dynamics shaped by factors such as race, nationality, ethnicity, indigeneity, sexuality, disability, religion, gender, or economic status. To meet this requirement, a course must allocate at least 50% of its content to examining these issues, be a minimum of three (3) credits, and achieve specific learning outcomes. These outcomes include demonstrating knowledge of diverse cultural practices, understanding systemic oppression, and assessing personal cultural perspectives to identify potential biases.

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling D-AG: SCD-AS, SCD-HA, D-HE.

Non-equated external transfer courses will only be considered for junior transfer students who have taken an appropriate course at their prior institution and whose schedule does not allow space to take a Human Diversity (D-AG) course at Cornell. These situations will be reviewed individually after a required appointment with CALS Student Services.

Cultural, Social & Historical Understanding

Take two (2) courses of the below distributions, with a maximum of one (1) course in each category: CA-AG, FL-AG, HA-AG, LA-AG, SBA-AG.

Cultural Analysis (CA-AG)

These courses study human life in particular cultural contexts through interpretive analysis of individual behavior, discourse, and social practice. Topics include belief systems (science, medicine, religion), expressive arts and symbolic behavior (visual arts, performance, poetry, myth, narrative, ritual), identity (nationality, race, ethnicity, gender, sexuality), social groups and institutions (family, market, community), and power and politics (states, colonialism, inequality).

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling CA-AG: ALC-AS, ALC-HA, ALC-AAP, CA-HE, CA-AAP, GLC-AS.

Foreign Language (FL-AG)

Foreign Language - Foreign Language courses available for CALS students at Cornell are offered by several departments, including Africana Studies and Research Center (AS&RC - language courses only), Asian Studies with languages such as Bangla-Bengali, Burmese, Chinese, Hindi, Indonesian, Japanese, Khmer, Korean, Sanskrit, Tagalog, Thai, and Vietnamese, and Classics (CLASS - language courses only). Additional offerings are provided by German Studies, which includes German, Dutch, and Swedish (language courses only), Linguistics (LING language courses only), Near Eastern Studies (NES - language courses only), Romance Studies with languages like Catalan, French, Italian, Portuguese, Quechua, and Spanish, and Russian Studies, covering Russian, Hungarian, Polish, Serbian/Croatian, and Ukrainian. CALS will recognize these Foreign Language (FL) classifications by any college at Cornell, provided the class is taken for three (3) or more credits. Transfer students may have non-Cornell courses that meet SUNY World Languages and are a minimum of three (3) credits reviewed as fulfilling FL-AG.

Historical Analysis (HA-AG)

These courses interpret continuities and changes - political, social, economic, diplomatic, religious, intellectual, artistic, scientific - through time. The focus may be on groups of people, dominant or subordinate, a specific country or region, an event, a process, or a time period.

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling HA-AG: HA-AAP, HST-AAP, HST-AAP, HST-AA, HA-HE.

Literature and the Arts (LA-AG)

These courses explore literature and the arts in two different but related ways. Some courses focus on the critical study of artworks and on their history, aesthetics, and theory. These courses develop skills of reading, observing, and hearing and encourage reflection on such experiences; many investigate the interplay among individual achievement, artistic tradition, and historical context. Other courses are devoted to the production and performance of artworks (in creative writing, performing arts, and media such as film and video). These courses emphasize the interaction among technical mastery, cognitive knowledge, and creative imagination.

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling LA-AG: ALC-AS, ALC-HA, ALC-AAP, LA-AAP.

Social and Behavioral Analysis (SBA-AG)

These courses examine human life in its social context through the use of social scientific methods, often including hypothesis testing, scientific sampling techniques, and statistical analysis. Topics studied range from the thoughts, feelings, beliefs, and attitudes of individuals to interpersonal relations between individuals (e.g., in friendship, love, conflict) to larger social organizations (e.g., the family, society,

religious or educational or civic institutions, the economy, government) to the relationships and conflicts among groups or individuals (e.g., discrimination, inequality, prejudice, stigmas, conflict resolution).

CALS also accepts courses of at least three (3) credits with the following distributions as fulfilling SBA-AG: SSC-AS, SBA-HE, SBA-AAP, SSC-AAP.

Written and Oral Expression

Nine (9) credits total, of which at least six (6) must be in Written Expression. Oral Expression is not required by the college but may be required for some majors. If Oral Expression is not required by the major, all nine (9) credits may be in Written Expression. Writing in the Majors (WIM) courses do not count towards Written Expression.

Written Expression (WRT-AG)

All students are required to take at least six (6) credits of Written Expression and may take nine (9) credits to fulfill the Written and Oral Expression requirement. Courses that fulfill the Written Expression requirement in CALS focus on enhancing students' writing skills. Courses meeting this requirement devote at least 50% of class time to writing proficiency, involve at least five (5) writing assignments with detailed feedback, and emphasize revision and development. These courses ensure personalized attention and help students articulate ideas clearly, argue effectively, and engage with evidence critically. This structure supports students in improving both their writing mechanics and their ability to communicate persuasively across contexts.

CALS also accepts FWS courses as fulfilling WRT-AG. Transfer students may have courses that meet the SUNY Writing Requirement considered to fulfill this requirement.

Oral Expression (ORL-AG)

Students may take one (1) Oral Expression course towards the nine (9) required credits for Written and Oral Expression. Courses that fulfill the CALS Oral Expression requirement enhance students' public speaking and communication skills. Courses meeting this requirement center on improving oral proficiency, dedicating over 50% of class time to the principles of effective communication. Each course involves at least five (5) formal oral presentations, with four (4) undergoing detailed revisions based on structured feedback that focuses on speech organization, clarity, evidence use, and delivery. These courses offer personalized guidance and encourage students to apply feedback to subsequent presentations. The aim is to refine students' abilities to articulate ideas persuasively and adapt messages for different contexts, ensuring they can communicate effectively on any topic.

Engaged, Experiential, Entrepreneurial (E3) Learning Milestone

The E3 Learning Milestone allows students to blend experiential learning with academics, apply theory to practice, and deepen their community and professional engagement. This milestone emphasizes learning through experience, engagement, and/or entrepreneurship, encouraging students to apply their academic knowledge in real-world settings in collaboration with diverse groups and community partners. By completing an E3-designated course or experience, students are able to link their classroom learning with practical application, understand how their experiences align with their academic goals at Cornell, and recognize their contributions to a broader community. Eligible E3 experiences include community-engaged courses, undergraduate research, internships, study-abroad programs, and more–each designed to foster these outcomes and enhance the student's role in their field and community.

Learning Outcomes

Upon completion of a course or experience that fulfills the E3 Learning Milestone requirement, students should be able to:

- Make connections between their disciplinary and scholarly learning and the practice or application of that knowledge.
- Explain how their course/experience contributes to and is informed by their learning goals at Cornell (i.e. in their major or course of study, as they define it).
- Explain how they engaged with and contributed to, or served, a community or cause greater than themselves.

The E3 Learning Milestone can be fulfilled by courses or non-coursebased experiences. Courses cannot apply to another distribution requirement if used for E3.

The following courses are accepted as fulfilling E3:

- · Any course with CU-CEL attribute.
- · Any course with EEE-AG distribution.
- CALS E3 Research and Teaching courses with EEE-AG. With advisor approval some Independent Study (4970) and Internship academic components (4960) may fulfill this requirement.

Courses and experiences that fulfill the E3 Learning Milestone must meet the following requirements:

- 1. Involve practice and application of knowledge in a real context.
- 2. Provide learning outcomes at the outset of the course or experience, including but not limited to the learning outcomes articulated above.
- 3. Include an assignment or activity that promotes student reflection on their experience.

Degree Programs

The College of Agriculture and Life Sciences (CALS) offers programs leading to the following degrees: Bachelor of Science (BS), Master of Science (MS), and Doctor of Philosophy (PhD). Professional degrees include the Master of Professional Studies (MPS), Master of Food Science (MFS), Master of Landscape Architecture (MLA) and Master of Engineering (MEng). Some registered professional licensing and certification programs are also available.

Undergraduate Majors

- Agricultural Sciences (BS) (https://catalog.cornell.edu/programs/ agricultural-sciences-bs/)
- Animal Science (BS) (https://catalog.cornell.edu/programs/animalscience-bs/)
- Applied Economics and Management (BS) (https:// catalog.cornell.edu/programs/applied-economics-management-bs/)
- Atmospheric Science (BS) (https://catalog.cornell.edu/programs/ atmospheric-science-bs/)
- Biological Engineering (BS) (https://catalog.cornell.edu/programs/ biological-engineering-bs/)
- Biological Sciences (BS) (https://catalog.cornell.edu/programs/ biological-sciences-bs/)
- Biology & Society (BA, BS) (https://catalog.cornell.edu/programs/ biology-society-ba/)
- Communication (BS) (https://catalog.cornell.edu/programs/ communication-bs/)

- Earth and Atmospheric Sciences (EASAG-BS) (https:// catalog.cornell.edu/programs/earth-atmospheric-sciences-easagbs/)
- Entomology (BS) (https://catalog.cornell.edu/programs/entomologybs/)
- Environment & Sustainability (BS) (https://catalog.cornell.edu/ programs/environment-sustainability-bs/)
- Environmental Engineering (BS) (https://catalog.cornell.edu/ programs/environmental-engineering-bs/)
- Food Science (BS) (https://catalog.cornell.edu/programs/foodscience-bs/)
- Global Development (BS) (https://catalog.cornell.edu/programs/ global-development-bs/)
- Global & Public Health Sciences (GPHSAG-BS) (https:// catalog.cornell.edu/programs/global-public-health-sciences-bs/)
- Information Science (BS) (https://catalog.cornell.edu/programs/ information-science-bs/)
- Interdisciplinary Studies (BS) (https://catalog.cornell.edu/programs/ interdisciplinary-studies-bs/)
- Landscape Architecture (BS) (https://catalog.cornell.edu/programs/ landscape-architecture-bs/)
- Nutritional Sciences (BS) (https://catalog.cornell.edu/programs/ nutritional-sciences-bs/)
- Plant Sciences (BS) (https://catalog.cornell.edu/programs/plantsciences-bs/)
- Statistics & Biometry (BS) (https://catalog.cornell.edu/programs/ biometry-statistics-bs/)
- Viticulture and Enology (BS) (https://catalog.cornell.edu/programs/ viticulture-enology-bs/)

Additional Course Offering Areas:

- · American Indian and Indigenous Studies
- Education
- Natural Resources
- Nondepartmental Courses (ALS and LEAD subject codes)
- ¹ Agriculture and Life Sciences (ALS) courses are not associated with any departments. These courses have broad interest among students across the college.

Undergraduate Minors

Students in the College of Agriculture and Life Sciences (CALS) at Cornell University can pursue one or more minors offered by any department within Cornell, provided they adhere to any restrictions set by the department offering the minor or their major. A minor is not required for graduation, and students cannot extend their studies beyond eight semesters (or equivalent) solely to complete additional minors.

- Animal Science Minor (https://catalog.cornell.edu/programs/animalscience-minor/)
- Applied Exercise Science Minor (https://catalog.cornell.edu/ programs/applied-exercise-science-minor/)
- American Indian and Indigenous Studies Minor (https:// catalog.cornell.edu/programs/american-indian-indigenous-studiesminor/)
- Atmospheric Science Minor (https://catalog.cornell.edu/programs/ atmospheric-science-minor/)

- Biometry and Statistics Minor (https://catalog.cornell.edu/programs/ biometry-statistics-minor/)
- Climate Change Minor (https://catalog.cornell.edu/programs/climatechange-minor/)
- Communications Minor (https://catalog.cornell.edu/programs/ communications-minor/)
- Community Food Systems Minor (https://catalog.cornell.edu/ programs/community-food-systems-minor-cfs/)
- Crop Management Minor (https://catalog.cornell.edu/programs/cropmanagement-minor/)
- Earth and Atmospheric Sciences Minor (https://catalog.cornell.edu/ programs/earth-atmospheric-sciences-minor/)
- Education Minor (https://catalog.cornell.edu/programs/educationminor/)
- Entomology Minor (https://catalog.cornell.edu/programs/ entomology-minor/)
- Environmental Engineering Minor (https://catalog.cornell.edu/ programs/environmental-engineering-minor/) - not admitting new students
- Environment & Sustainability Minor (https://catalog.cornell.edu/ programs/environment-sustainability-minor/)
- Food Science Minor (https://catalog.cornell.edu/programs/foodscience-minor/)
- Fungal Biology Minor (https://catalog.cornell.edu/programs/fungalbiology-minor/)
- Global Development Minor (https://catalog.cornell.edu/programs/ global-development-minor/)
- Global Health Minor (https://catalog.cornell.edu/programs/globalhealth-minor/)
- Horticulture Minor (https://catalog.cornell.edu/programs/ horticulture-minor/)
- Leadership Minor (https://catalog.cornell.edu/programs/leadershipminor/)
- Nutrition and Health Minor (https://catalog.cornell.edu/programs/ nutrition-health-minor/)
- Plant Breeding Minor (https://catalog.cornell.edu/programs/plantbreeding-minor/)
- Plant Sciences Minor (https://catalog.cornell.edu/programs/plantsciences-minor/)
- Soil Science Minor (https://catalog.cornell.edu/programs/soilscience-minor/)
- Viticulture and Enology Minor (https://catalog.cornell.edu/programs/ viticulture-enology-minor/)

Graduate and Professional Degrees

The CALS professional master's programs offer challenging opportunities for individuals who choose to continue education in their current or related field.

Administered by the Graduate School:

- Agriculture and Life Sciences (Biological and Environmental Engineering) (MPS) (https://catalog.cornell.edu/programs/ agriculture-life-sciences-biological-environmental-engineering-mps/)
- Animal Science (MPS) (https://catalog.cornell.edu/programs/animalscience-mps/)
- Food Science (MFS) (https://catalog.cornell.edu/programs/foodscience-technology-mfs/)

- Global Development (MPS) (https://catalog.cornell.edu/programs/ global-development-mps/)
- Integrative Plant Science (MPS) (https://catalog.cornell.edu/ programs/integrative-plant-science-mps/)
- Landscape Architecture (MLA) (https://catalog.cornell.edu/ programs/landscape-architecture-mla/)
- Landscape Architecture Advanced Degree (MLA) (https:// catalog.cornell.edu/programs/landscape-architecture-mla-adv-deg/)
- Landscape Architecture (MPS) (https://catalog.cornell.edu/ programs/landscape-architecture-mps/)
- Natural Resources and the Environment (MPS) (https:// catalog.cornell.edu/programs/natural-resources-mps/)

Others CALS Affiliated Degree Programs

- Biological and Environmental Engineering (MEng) (https:// catalog.cornell.edu/programs/biological-environmental-engineeringmeng/)
- Landscape Architecture and City & Regional Planning (MLA/MRP) (https://catalog.cornell.edu/programs/mla-mrp/)

Policies and Procedures

Academic Integrity

The College of Agriculture and Life Sciences (CALS) faculty, students, and administration support and abide by the University Code of Academic Integrity (https://deanoffaculty.cornell.edu/faculty-and-academic-affairs/ academic-integrity/code-of-academic-integrity/). More information can be found on the CALS Academic Integrity website (https://cals.cornell.edu/ faculty-staff/advising-resources/academic-integrity/).

Academic Standing

CALS expects all students to maintain good academic standing, which is defined as:

- Semester GPA of at least 2.00.
- · Cumulative GPA of at least 2.00.
- Satisfactory completion of a minimum of 12 or more academic credits per semester.
- Students must enroll in at least one CALS course each semester until the required number of CALS credits have been successfully completed.
- · Maintain reasonable progress within a students' major.

Committee on Academic Achievement and Petitions

The College of Agriculture and Life Sciences at Cornell University is committed to helping each student reach their full academic potential. Students are encouraged to consider their academic and personal goals leading them to take responsibility for their academic choices and decisions. The Committee on Academic Achievement and Petitions has two main tasks:

- 1. decide on students' petitions for exceptions to college requirements or rules and
- 2. review the records of students who fail to maintain good academic standing.

For students not making satisfactory progress or in good standing, the committee takes appropriate academic action. It accomplishes both tasks with consideration of each individual situation.

Academic Petitions

Students with extenuating circumstances that necessitate exceptions to normal rules may be eligible to submit a petition to the Committee on Academic Achievement and Petitions. College and University policies guide petition decisions. A petition is usually prepared with the assistance of a student's faculty advisor. The advisor's recommendation is helpful to the committee.

The Committee on Academic Achievement and Petitions reviews the petition and determines whether the circumstances would warrant an exemption or other action. If the committee does not believe the request warrants review, the petition will be denied. All decisions are final. Students may appeal a decision only if they can present new information or documentation.

Electronic petitions can be found in DUST or may be provided by a CALS Student Services staff member. For more information, please review Information on Filing Petitions (https://cals.cornell.edu/undergraduatestudents/student-services/academic-resources/petitions-forms-andpolicies/petitions/) or contact the CALS Office of Student Services, 140 Roberts Hall, cals-studentservices@cornell.edu.

Academic Actions

At the end of each semester, the Committee on Academic Achievement and Petitions reviews the records of all students and takes appropriate action, including but not limited to issuing warnings, placing students in the Academic Success Program, granting students a leave of absence, advising students to withdraw, or placing them on required academic leave or required academic withdrawal. Students may submit a written statement explaining their academic performance for committee consideration during the student progress review process.

Leave of Absence/Return/Withdrawal

Students wishing to take a leave are required to request a voluntary leave of absence with intent to return in a future semester. A leave of absence is granted for up to five years. A leave exceeding five years results in an official withdrawal from the University. Due to changing curriculum and major requirements, readmission from a leave of five years or greater requires reapplication through CALS Admissions. Students on a leave of absence are not eligible for housing, dining, library, and transportation services. To satisfy Cornell degree requirements, courses taken at an external institution must be pre-approved.

Types of Leaves Voluntary Leave

A voluntary leave may be taken for no less than one semester and no greater than five years. During the semester, a student may request to take a voluntary leave of absence through the last day of the semester. Students who are in good standing with the college at the conclusion of a semester may request to take a voluntary leave to suspend their studies prior to the start of the upcoming semester. Submitting the form serves as appropriate notification to university offices and assures the leave is reflected appropriately on the student's official transcript. Once a leave of absence granted during the semester has been approved, the effective date of the leave is backdated to the date the student submitted the form.

Students sometimes find it necessary to take a leave of absence at some point during the semester. These are characterized as "in-term" leaves and may have academic and financial impacts depending on the specific date the leave is officially requested (see the Proration Schedule for Withdrawals and Leaves of Absence). Students may wish to consult with their advisor to understand their individual situations and the implications of taking an in-term leave. The CALS Office of Student Services may place academic conditions on the return based on curriculum sequencing, time-to-degree requirements, or academic actions that will be determined and communicated to the student by the end of the term.

Required Leave

Refer to the Academic Standing section for more information.

Health Leave

Students with health concerns must pursue a Health Leave of Absence (https://health.cornell.edu/get-care/health-leave-absence/) through Cornell Health. The CALS Office of Student Services may place academic conditions on the return based on curriculum sequencing, time to degree requirements, or academic actions that will be determined and communicated to the student by the end of the term.

Enrollment Restrictions while on Leave:

Students on any leave of absence may not enroll in any classes offered through Cornell University including through the School of Continuing Education (summer/winter sessions). Students wishing to attend summer or winter sessions at Cornell must request a return from leave and obtain college approval. Courses taken without college permission will not count toward degree requirements.

Credit for courses completed at foreign institutions during a leave of absence from the College of Agriculture and Life Sciences will not be accepted for transfer credit. International students on leave of absence from the College of Agriculture and Life Sciences may enroll in courses at an accredited college or university in their home country only, as such enrollment is not defined as study abroad.

Return from Leave

A student requesting to return from a Voluntary Leave of Absence must request to return through DUST (https://dust.cals.cornell.edu/). Returns from required leaves will use the same DUST petition and are additionally reviewed by the Committee on Academic Achievement and Petitions.

Students who wish to return from a Health Leave of Absence (https:// sds.cornell.edu/accommodations-services/health-leave-absence/ returning-health-leave-absence/) should contact the Health Leaves Coordinator to begin the return process. Students will need to have an advising conversation with their department advisors and/or CALS Student Services for academic planning and meet any conditions placed on their leave by the College before they can return from Health Leave.

The deadline to request a return from Voluntary Leave is November 30th for a spring return and July 15th for a fall return. Requests received after these dates will be denied. Refer to the Health Leaves webpage (https://health.cornell.edu/get-care/health-leave-absence/) for Health Return recommended timeline.

All grading/incomplete policies (https://cals.cornell.edu/faculty-staff/ advising-resources/grading-guidelines-for-faculty/) are in effect during all leave types. If you have questions concerning the make-up of incomplete grades, please speak with an academic advisor in the CALS Office of Student Services.

Withdrawal

Voluntary withdrawal. A student who decides to withdraw from Cornell University for personal reasons or matriculation in another institution of higher learning, with no intention of returning, must submit the online University Withdrawal Form (https://withdrawal.cornell.edu/default/). Students not requesting a leave and who fail to become registered will be withdrawn from the university. Required Academic withdrawal, refer to the Academic Standing section for more information.

* Subject to change.

Non-Cornell (Transfer) Credit

The College of Agriculture and Life Sciences (CALS) and Cornell University reserve the right to determine, in their sole discretion, whether course credit earned at other schools, either secondary or postsecondary, meet the College's academic standards and will, therefore, be eligible to be applied toward college degree requirements.

Applicants and matriculated students should not assume that, because a particular course is taken at another accredited institution listed as a recommended course or a foundational course, will necessarily be eligible for Cornell credit.

For information about how transfer credit is defined, reviewed and accepted by the university, please refer to University Transfer Credit Policy (https://registrar.cornell.edu/credit_evaluation/).

Additional College Specific Information

- Students are limited to 15 advanced placement credits (this includes all non-Cornell (transfer) credit earned before matriculation as a firstyear student from an accredited college/university). More information and scores can be found on the CALS Transfer Credit Page (https:// cals.cornell.edu/undergraduate-students/cals-student-services/ academic-resources/transfer-credit/).
- A student may apply a maximum of 60 non-Cornell (transfer) credits towards their graduation requirements.
 - If more than 60 non-Cornell (transfer) credits have been completed, the CALS Student Services staff will work with the student to determine which credits best fulfill CALS graduation requirements.
- Non-Cornell (transfer courses) that are similar to courses offered in CALS are evaluated at the college level and if appropriate may be recorded as CALS credits and count towards the minimum number of CALS credits required for graduation. They may also fulfill distribution requirements and be recorded under the appropriate distribution area.

Continuing Students

- During the regular fall and spring semesters, continuing students cannot simultaneously be enrolled in Cornell courses and in courses at an external institution, unless pre-approved as part of an official exchange program. These courses are ineligible for transfer credit.
- To Pre-approve Non-Cornell (transfer) Credit
 - Continuing students who plan to take courses at another regionally accredited institution are required to have transfer courses pre-approved to ensure they will transfer. Part of the approval process will require students to check with their academic advisor to pre-approve any courses for a specific major requirement. An official transcript from the offering institution (bearing the institutional seal and Registrar's signature) must be sent to the CALS Office of Student Services before official transfer credit will be awarded.

College Credit Earned While in High School

Cornell University does not accept credit for courses sponsored by colleges or universities but taught in the high school to high school students, even if the college provides an official college transcript.

Coursework completed while in high school may be considered for credit if there is sufficient evidence that:

- The course was a standard course available to all students registered at the college/university.
- The course is taken on a college/university campus with matriculated degree students and is taught by a college/university professor.
- The course instructor is a faculty member (includes adjunct) at the college offering the course.
- The course is not listed on the high school transcript as a course counting towards the high school diploma.

Credit may be awarded only after the CALS First-Year Admissions Requirements for Secondary School Subjects criteria (https:// admissions.cornell.edu/how-to-apply/first-year-applicants/) have been met. Students must submit the CALS application for credit earned while in High School for each class (https://experience.cornell.edu/resources/ cals/) along with an official college transcript to CALS Office of Student Services.

College Credit Earned by Homeschooled Students

If a student is enrolled in college or university courses during their homeschool experience, non-Cornell (transfer) credits may be awarded only after the CALS First-Year Admissions Requirements for Secondary School Subjects criteria (https://admissions.cornell.edu/how-to-apply/ first-year-applicants/) have been met. Transfer credit cannot be awarded toward courses used to satisfy secondary school/General Education Diploma (GED) requirements. If a General Education Diploma is awarded, students may be able to apply a maximum of 15 non-Cornell credits earned before receipt of the General Education Diploma.

Advising

Inclusive Academic Advising

The Inclusive Academic Advising staff within the Office of Student Services supports all CALS undergraduate students, serves as the College's central undergraduate advising office, supports the faculty advising system, and offers consultation and support for academic issues including the college petitions process. Staff members are available to assist students in understanding college/university policies as well as provide an additional network of support and referral throughout a student's undergraduate career.

Career Development

Career development services are available to support all students and alumni of the College in exploring careers and developing strategies to reach one's career goals. Services include self-assessment, support with career exploration, decision-making, and transition to employment as well as graduate and professional school. An active campus recruiting program connects more than 135 employers with students each year to interview for full-time positions and internships. Services are designed to assist students and alumni in developing the career planning and job search skills necessary to manage one's career.

Faculty Advisors

Faculty advisors are a crucial resource for undergraduate students. They are the student's principal point of contact regarding their academic progress. Faculty advisors help students with curriculum questions and major requirements.

International Engagement

To support students' diverse interests, needs, and desires, there are a variety of international opportunities available to CALS students. The international staff within the Office of Student Services and the Office of Global Learning (OGL) supports students on all international opportunities and guide them through the application process. While a semester or academic year may be the more traditional approach to an international experience, this is not the only option. We encourage students to look at all the opportunities available to them based on their needs, interests, and goals. Having a meaningful international experience can increase a student's independence, ability to be flexible, and marketability in the workforce.

Pre-Health Advisors

Pre-Health advisors can provide academic and career guidance and answer questions about medical, dental, and veterinary schools, healthrelated careers, and experiential opportunities. Additional information about pre-health programs can be found on the Health Professions Advising Center (https://prehealthadvising.cornell.edu/) website.

Pre-Law Advisors

Pre-law advisors can provide academic and career guidance and answer questions regarding law-related careers, law school applications, and identifying experiential opportunities. Additional information about law-related careers can be found on the CALS website (https:// cals.cornell.edu/undergraduate-students/cals-student-services/career-development/) and/or the university Career Services website (https:// career.cornell.edu/channels/law/).

Peer Advisors

Peer Advisors are a vital part of the CALS Office of Student Services. These student employees provide programs, services, and leadership to the global CALS community in a supportive, inclusive, and respectful manner.

Grades

Letter Grades

See Grading Guidelines section of the catalog.

S/U (Satisfactory/Unsatisfactory) Grades

The purpose of the Satisfactory/Unsatisfactory (S/U) system is to encourage students to venture into courses outside their main areas of familiarity without great risk to the academic record.

- S means satisfactory, as defined by performance that would be graded C- or higher, and U means unsatisfactory, as defined by performance that would be graded below C-.
- Cornell does not issue grades on a Pass/Fail basis; to earn a grade of S the threshold for successfully completing and earning credit for a course is a minimum grade of C-.
- Grades of S and U are not given grade point values or considered in computing grade point averages.
- Students earn credit toward the fulfillment of graduation requirements for course grades of S, but not for course grades of U.
- Students must select their grading option by the end of the dropdeadline of the semester. No exceptions to this deadline are permitted.
- Within the 120 credits required for the degree, a minimum of one hundred (100) letter credits must be earned.

More information is in the Grading Guidelines section of the catalog.

Incompletes

The symbol of Incomplete (INC) is only appropriate when two basic conditions are met:

- 1. The student has substantial equity at a passing level in the course with respect to work completed; and
- 2. The student has been prevented by circumstances beyond their control, from completing all the course requirements on time.

While it is the student's responsibility to initiate a request for a grade of incomplete (INC), reasons for requesting one must be approved by the instructor. The instructor will establish specific make-up requirements and deadlines for completion.

Additional Information:

- Students should not re-enroll in a course where they have received an incomplete (INC). Instead, coursework should be completed under the direction of the course instructor.
- The deadline for completion of remaining coursework for an incomplete (INC) defaults to two (2) successive semesters. Instructors may require shorter deadlines.
 - If a deadline is not entered, two (2) successive semesters serve as the default deadline.
- If the coursework is not completed within the designated time period, the notation of incomplete (INC) will be converted to a failure (F) or unsatisfactory (U/UX) grade depending on the grading structure of the course.
- Students should be aware that incompletes (INC) are interpreted as credits not passed during a given semester.
- Once a degree has been conferred, no additional work can be completed toward the incomplete (INC). Refer to closure of student record.
- A degree may not be conferred with an incomplete (INC) on the transcript.

For additional information, please refer to University guidelines on incompletes found on the Exam and Grading page (https:// catalog.cornell.edu/enrollment-credit-requirements/exams-grading/).

Changes in Grades

To avoid the influencing of grades by improper consideration or student pressure, a grade, once given, may only be changed if an error in the original grade is confirmed by the instructor. The instructor should be willing to review the basis of an assigned grade with an inquiring student and correct the grade if an error is found. As a matter of equity, grades must not be changed after the end of a semester based on a student's subsequent completion of additional work. Upon degree conferral, all courses and grades on a student's transcript are frozen and may not be altered. For additional information, see Grading Guidelines and faculty legislation regarding Grade Changes (https://deanoffaculty.cornell.edu/ policies-procedures/faculty-handbook/6-academic-policies-andresponsibilities/#Instruction).

Registration and Course Enrollment University Record Holds

The University assumes certain legal responsibilities for persons who participate as students in the University environment. As a result, specific requirements must be met in order to be eligible to remain enrolled for a current term or enroll in a subsequent term. For more information, refer to University Record Holds.

Enrollment Procedures

New first-year and transfer students will participate in pre-enrollment in the summer prior to their arrival on campus. Students will be contacted by the advising office with details about the enrollment process. Please visit the New Student Information (https://cals.cornell.edu/ undergraduate-students/cals-student-services/new-students/courseenrollment/) webpage.

- Entering first-year students can enroll in a maximum of eighteen (18) credits in their first semester (including non-academic credits such as PE or review/supplemental courses.) On average, students take five (5) academic credits a semester to stay on track to graduate within four (4) years.
- First-year students are limited to one (1) academic course with an S/ U grade option per semester.

Continuing Students

Students should discuss their course selection and long-range goals with their faculty advisors or department advising coordinator prior to enrollment.

• Continuing students select and enroll in up to eighteen (18) credits during the pre-enrollment period through Student Center (http:// studentcenter.cornell.edu/) and up to a maximum of twenty - two (22) credits during Add/Drop.

General Enrollment Information

Instructions regarding course enrollment are available at Course Enrollment and Credits (https://catalog.cornell.edu/enrollment-creditrequirements/course-enrollment-credits/), Classes and Enrollment (https://registrar.cornell.edu/classes-enrollment/), and Academic Policies (https://cals.cornell.edu/undergraduate-students/cals-student-services/ academic-resources/cals-academic-policies/).

- The official enrollment platform for Cornell University is Student Center (http://studentcenter.cornell.edu/).
- The Class Roster (http://classes.cornell.edu/) can be used to search available courses by semester. Please note: some courses may have add/drop deadlines separate from the University dates.
- Students may add and drop classes during the specified enrollment periods (pre-enrollment and add/drop) of each fall and spring semester.
- Pre-enrollment is an enrollment request; it is not a guarantee of enrollment. Before the beginning of each semester, course requests are evaluated by the offering college department.
- At the beginning of the Add/Drop period, it is the student's responsibility to confirm their schedule in Student Center (http:// classes.cornell.edu/).
- Students must enroll in at least one CALS course each semester until the required CALS credits have been earned.

Enrollment Changes

A student is held responsible for and receives a grade for enrolled courses unless the student officially changes their enrollment. Both the university and college provide calendars with key academic dates for add, drop, and withdrawal deadlines (https://registrar.cornell.edu/ calendar/2025-2026/) each semester. It is your responsibility as the student to be aware of and abide by these deadlines.

All changes in courses, credits, grading options, or sections must be made by the student. Approval of the faculty advisor may be required to change course enrollment. Department or course instructor approval may be required for select courses. Contact the Office of Student Services for more information.

- Students may add courses and change credit hours, if applicable, through the academic add deadline of the current semester (with the exception of specific courses with special deadlines).
- Students may drop courses and change grading options through the academic drop deadline of the current semester. Dropping a course removes it from the academic transcript.
- Deadlines for short courses will be adjusted according to the length of the course.
- Requests to add a course to previous semester's enrollment is not permitted.
- Requests to withdraw from a course in a previous semester is not permitted.
- After the academic drop deadline of the current semester, through the withdrawal deadline, students may request to withdraw from a class by submitting a form to the CALS Office of Student Services, if there are no pending academic integrity violations.
- If a withdraw results in a student going lower than twelve (12) academic credits or there are pending academic integrity violations, the student may be required to meet with a CALS Student Services Advisor before the form is processed.
- Courses with "no drop" policies or early drop dates are not eligible for this process.
- Courses officially dropped after the academic drop deadline will be permanently noted on the official academic transcript with a "W" where the grade would normally appear and there is no impact to the student's cumulative grade point average (GPA). This is a matter of record and is permanent.

A meeting with a CALS Office of Student Services advisor is recommended if there are questions about the above criteria.

Minimum number of credits per semester

Students must be enrolled in a minimum of twelve (12) academic credits per semester to be considered full-time in good academic standing. Students are encouraged to enroll in an average of fifteen (15) academic credits per semester to be on track to graduate in eight (8) semesters.

• Review or supplemental courses (1000 to 1099 level courses and Physical Education (PE courses)) will not count towards the twelve (12) credit minimum required for full-time status

Maximum number of credits per semester

CALS undergraduate students may enroll in up to twenty-two (22) credits maximum (twenty-two (22) credits are allowed only when add/drop begins). We strongly urge ALL students to limit their semester enrollment to eighteen (18) credits. All undergraduate CALS students in good academic standing may enroll up to twenty-two (22) credits maximum.

Petitions to exceed twenty-two (22) credits up to a max of twenty- five (25) credits will not be considered, except for students expecting to graduate in the current academic year. Petitions will be considered based on meeting all of the following criterium if applicable:

- Case-by-case review showing strong academic performance with a heavy credit load.
- GPA of at least 3.3 for the previous three (3) semesters.
- No grades of incomplete (INC).
- The course is required for graduation with confirmation by the Academic Advisor.
- Timely petition submission (available in DUST (https:// dust.cals.cornell.edu/)). Petitions will not be accepted after the

University add deadline (https://registrar.cornell.edu/academiccalendar/2025-2026/).

Taking a course more than once (repeated)

Repeated courses are courses taken a second (or subsequent) time, even if a passing grade was earned. It is the student's responsibility to inform the CALS Office of Student Services (cals-studentservices@cornell.edu) and the faculty advisor that they are planning on repeating a course. For more information about how repeated coursework may impact financial aid, see the Course Repeats and Financial Aid Eligibility (https:// finaid.cornell.edu/policies/course-repeats-and-financial-aid-eligibility/) website. More information about University policy can be found in the Course Enrollment and Credits (https://catalog.cornell.edu/enrollmentcredit-requirements/course-enrollment-credits/) section.

Note:

- Both classes and both grades are included on the official transcript (i.e., if a course is repeated, the second course does not replace the first course on the official transcript) and calculated as part of the cumulative GPA.
- If a student retakes a course in which a passing grade was earned, both grades will be recorded and calculated accordingly as part of their cumulative GPA (grades of U and UX have no impact on a GPA).
- Credits earned from repeating a course do not count toward the minimum number of credits required for graduation.
 - Some courses, such as research or independent study, may be repeated more than once for academic credit. For more information please see Course Enrollment and Credits (https:// catalog.cornell.edu/enrollment-credit-requirements/courseenrollment-credits/).
- Repeated course credits count toward the minimum of twelve (12) credits per semester required for good academic standing and full-time status.
- If a student repeats a course with a non-Cornell (transfer) class after the course has previously been passed at Cornell, the course will not transfer onto the academic student record in CALS.
- Completing a forbidden overlap course will not count towards the overall credits required for graduation.

Time Conflict

The College of Agriculture and Life Sciences (CALS) does not support class time conflict requests, as students are expected to attend classes according to the federal credit hour regulations. Students are expected to participate in each class in the format in which the class is offered. Generally, students cannot enroll in courses that meet at the same time or at overlapping times. Time conflict overrides are NOT available for a student to attend one class and arrange to watch asynchronous lectures and complete the coursework for a second class outside of the course time.

In rare circumstances, CALS will consider a time conflict override form (https://cals.cornell.edu/undergraduate-students/cals-student-services/ academic-resources/special-studies-academic-policies-and-petitionsand-forms/academic-policies/), contingent on meeting all the following criteria:

 The student must be in good academic standing (https:// cals.cornell.edu/undergraduate-students/cals-student-services/ academic-resources/special-studies-academic-policies-and-petitionsand-forms/academic-policies/) in CALS.

- The time conflict, including travel time, cannot be greater than ten (10) minutes of a single class meeting for either class.
 - Classes that overlap by more than ten (10) minutes, including travel, will be automatically denied.
- Permission is required from both instructors of the two (2) conflicting classes.
 - Instructors and/or departments have the discretion to deny these requests.
 - Consideration may be given if the student has extenuating circumstances, such as needing to meet degree requirements/ graduate on time.
- On-time submission of the Time Conflict Override form (available in DUST), opening ahead of the add/drop period.
- If the class is closed or at the enrollment cap, students must obtain a permission code and add the code to the override form.
- · Requests will not be accepted after the University add deadline.

Although video recordings may be available, they are not intended to replace in-class participation. If the classes are offered on the same day/ time, students will not be permitted to enroll in both classes, regardless of delivery method.

Forbidden Overlaps

The university offers a broad range of diverse courses. Many of these courses have overlapping content, and students must make their selections carefully to ensure that they will receive credit for each course they take. Students who enroll in courses with overlapping content will only receive credit for one of those courses.

Students are not prevented from enrolling in a course that is an overlap. However, it is the student's responsibility to inform the CALS Office of Student Services (cals-studentservices@cornell.edu) and the faculty advisor that they are planning on enrolling in a forbidden overlap course.

- Forbidden overlap courses count toward the minimum of twelve (12) academic credits per semester required for good academic standing and full-time status.
- Both courses and both grades are included on the official transcript (i.e., if a class is repeated, the second course does not replace the first course on the official transcript) and calculated as part of the cumulative GPA.
- Credits earned from a forbidden overlap course do not count toward the minimum number of credits required for graduation.

Audit

Undergraduate and professional students may not audit courses.

Double Majors in CALS

Students are admitted into a single major. Completion of one (1) major is required for graduation. Some students may choose to complete more than one (1) major. Completed majors are posted on the official transcript. Students are not allowed permitted to extend their studies beyond eight (8) semesters (or the equivalent) in order to complete additional majors or minors.

Students interested in declaring an additional major can find more information on the CALS website. (https://cals.cornell.edu/ undergraduate-students/major-changes-and-double-major/) Students who pursue an additional major choose a major that is available within the College of Agriculture and Life Sciences.

- Double majors across colleges are not permitted. For example, students may not double major in CALS Biological Engineering or Environmental Engineering and any other Engineering major.
- Students majoring in CALS Landscape Architecture may find it challenging to double major within CALS. Due to the studio-based nature of the Landscape Architecture curriculum, no more than twelve (12) credits typically electives are expected to overlap with another CALS major.
- Similarly, students majoring in CALS Biological Engineering or Environmental Engineering may find it difficult to double major within CALS. The specialized nature of engineering coursework means that no more than twelve (12) credits - generally electives - are likely to overlap with another CALS major.

Academic Honors

University Honors

Beginning with the December 2026 conferral date, Cornell University will institute a standardized Latin Honors system based solely on final cumulative undergraduate GPA. The Latin Honors categories include: Summa Cum Laude (top 5%), Magna Cum Laude (next 10%), and Cum Laude (next 15%).

The student's cumulative undergraduate GPA percentile at the time of degree conferral will be computed with respect to the student's particular college/school degree program (e.g., B.S. in CALS, B.A. in A&S, B.S. in ILR, B.F.A. in AAP).

College of Agriculture and Life Sciences Honors Bachelor of Science with Honors

Students must meet one (1) of the following sets of criteria to receive a Bachelor of Science degree with Honors:

- Students receiving a cumulative Cornell GPA of 4.00 or higher will graduate "Summa Cum Laude."
- Students receiving a cumulative Cornell GPA of greater than or equal to 3.75 and less than 4.00 will graduate "Magna Cum Laude."
- Students receiving a cumulative Cornell GPA of greater than or equal to 3.50 and less than 3.75 will graduate "Cum Laude."

Note, this college specific Latin Honors system will be discontinued at the end of Summer 2026.

Bachelor of Science with Distinction in Research

A Bachelor of Science degree with "distinction in research" is conferred upon those students who, in addition to having completed the requirements for the Bachelor of Science degree, have satisfactorily completed the honors program in their area of major interest and have been recommended for the distinction by the honors committee. Program requirements are outlined in the Research Honors Program section of this catalog.

Dean's List

Cornell University is phasing out individual school and college Dean's Lists. The Dean's List designation will not apply to undergraduate students matriculating in Summer 2023 and beyond. It will be discontinued for all students at the end of the Spring 2026 semester.

Graduating Early, Late or Elsewhere Graduating Early

Students may elect to graduate in fewer than eight (8) (or equivalent) fulltime semesters if they can complete all graduation (college, major, and university) requirements. Requests will be considered under the following conditions:

- College Residency Requirement (https://cals.cornell.edu/ undergraduate-students/cals-student-services/degree-advising/calsgraduation-requirements-for-bachelor-of-science/): Students must satisfy the college residency requirement.
- Official Request for Early Graduation: Students may request to graduate early and officially change the degree date immediately following the pre-enrollment period for the anticipated final semester.
- 3. Pre-enrollment in required classes: Students must pre-enroll in the classes required to meet graduation requirements (major, college and university) by the requested date.
- Application to Graduate: Once the graduation date has been updated, students must complete Parts I and II of the application to graduate found in DUST.

Graduating Late

The Bachelor of Science degree is expected to be completed in eight (8) academic full-time semesters (or equivalent). Limiting students to eight (8) semesters is important because:

- This limit encourages individual students to complete their undergraduate degree at an appropriate time.
- It ensures that university resources are allocated equitably and used effectively and efficiently, and that federal financial responsibilities are met.

In the rare event the degree requirements cannot be completed in eight (or equivalent) terms, students may request permission to delay their expected degree date under the following conditions:

- College Residency Requirement (https://cals.cornell.edu/ undergraduate-students/cals-student-services/degree-advising/calsgraduation-requirements-for-bachelor-of-science/): Students must satisfy the college residency requirement.
- 2. Official request to delay graduation (https://cals.cornell.edu/ undergraduate-students/cals-student-services/academic-resources/ cals-academic-policies/): Requests will only be granted for students who have found themselves in emergent circumstances beyond their control which have prevented them from completing the degree requirements in eight (8) terms.
- Requests cannot be made until the student's final expected graduation term and will not be reviewed without confirmation from the student's major department.

Students are expected to make satisfactory academic progress (https://cals.cornell.edu/undergraduate-students/cals-studentservices/academic-resources/cals-academic-policies/) on graduation requirements (college, major, and university) each semester and complete the requirements for graduation within eight (8) (or equivalent) terms. If degree requirements cannot be completed in eight (8) (or equivalent) terms, a student may seek permission to continue their studies. Requests will be considered for students who have found themselves in emergent circumstances beyond their control, which prevented them from completing the degree in eight (or equivalent) terms.

Study beyond the eighth (8th) (or equivalent) term will not be approved for the following reasons (this is not intended to be an exhaustive list).

- The purpose of changing a major.
- Requests to add an additional major, minor, or specialized coursework.

- To complete pre-requisite courses for a graduate or professional program
- To raise the GPA
- · To maintain other benefits, such as insurance.

Finish Elsewhere

In some cases, students need an additional course beyond their expected graduation date and are unable to complete this course at Cornell University. In this situation a student can request to complete their coursework elsewhere (up to eight (8) academic credits). To do this, students must:

- Step 1: Communicate their intentions to CALS Student Services to initiate the process.
- Step 2: Attain pre-approval of the transfer course(s) (https:// cals.cornell.edu/undergraduate-students/cals-student-services/ academic-resources/transfer-credit/) the student would like to take from CALS Student Services and also by the student's major if applicable
- Step 3: Once the transfer credits are pre-approved, request that CALS Student Services provide the student with the petition to finish elsewhere.
- Step 4: In addition to completing the petition, submit a request to update the expected degree date through DUST (https:// dust.cals.cornell.edu/) by completing the 'Online Application to Update Degree Standing'

Graduation

Degrees are conferred three (3) times each year in May, August, and December. These dates are published in the university's Academic Calendar (https://registrar.cornell.edu/academic-calendar/2025-2026/).

During their senior year, students will receive an email from the CALS Office of Student Services prompting them to complete an online application to graduate. This application helps expected graduates identify any academic issues early enough to make necessary adjustments to their course selection and ensure all requirements are met.

It is the student's responsibility to meet all graduation requirements. Any problems discovered must be resolved before the degree can be conferred. Students are responsible for regularly reviewing their progress toward their degree and ensuring they are fulfilling all degree requirements. If graduation requirements are unclear or if there are discrepancies in the academic record, students should consult their major advisor and/or the CALS Office of Student Services for clarification. It is the student's responsibility to complete the Application to Graduate, located in DUST (https://dust.cals.cornell.edu/), by the specified deadlines.

Faculty

The below list does not include all Biological Sciences faculty. For the comprehensive list, see the Biological Sciences Faculty page (https://catalog.cornell.edu/exploratory-studies/biological-sciences/ #facultytext).

A

Abbaspourrad, Alireza, Ph.D., Isfahan University of Technology (Iran)., Prof Assoc, Food Science

Abraham, Mathew, Ph.D., Copenhagen Business School, Research Assoc. Sr, Global Development

Acevedo, Maricelis, Ph.D., University of Nebraska - Lincoln, Research Prof., School of Integrative Plant Science

Acree, Terry, PhD, Cornell University, Prof. Emeritus, Food Science

Acuna-Maldonado, Laura, PhD, Cornell University, Extension Assoc. - SP, Food Science

Adler, Kraig, Ph.D., Univ. of Michigan, Prof Emeritus, Neurobiology & Behavior

Adler, Kraig, Ph.D., Univ. of Michigan, Prof Emeritus, Neurobiology & Behavior

Agrawal, Anurag, Ph.D., University of California, Davis, Prof., Ecology & Evolutionary Biology

Ahner, Beth, Ph.D., Massachusetts Inst. of Technology., Prof., Biological & Environmental Engr

Aker, Jenny, Ph.D., University of California, Berkeley, Prof., Global Development

Al Shoffe, Yosef, Ph.D., Damascus University, Research Assoc. Sr, School of Integrative Plant Science

Alani, Eric, Ph.D., Harvard University, Prof., Molecular Biology & Genetics

Alcaine, Samuel, Ph.D., U. of Massachusetts., Prof Assoc, Food Science

Allen, Jeremy, Ph.D., Cornell University, Lecturer Sr, Animal Science

Aller, Deborah, Ph. D., Iowa State University, Extension Assoc. Sr, School of Integrative Plant Science

Allington, Ginger, Ph.D., U. of Saint Louis., Prof Asst, Natural Resources

Allred, Shorna, Ph.D., Oregon State University, Adjunct Prof., Natural Resources

Almeida, Zoe, PhD, Ohio State University, Research Assoc. Sr, Natural Resources

Amsili, Joseph, Master of Science, Pennsylvania University, Extension Assoc. Sr, School of Integrative Plant Science

Anderson, C., Ph.D., U. of Western Ontario (Canada)., Prof., Biological & Environmental Engr

Andres, Jose, Ph.D., Universidad de Vigo, Research Assoc. Sr, Ecology & Evolutionary Biology

Andrievskikh, Natalia, PhD, Binghamton University, Lecturer Sr, Communication

Angert, Esther, Ph.D., Dr. Norman Pace at Indiana University, Bloomington, IN, Prof., Microbiology

Anstett, Daniel, Ph.D., University of Wisconsin - Madison, Prof Asst, School of Integrative Plant Science

Arnink, Kathy, B.A., Wells College., Lecturer, Food Science

Aukema, Brian, Ph.D., University of Wisconsin-Madison, Extension Assoc. Sr, Animal Science Ault, Toby, Ph.D., U. of Arizona., Prof Assoc, Earth and Atmospheric Science

Aymer, Valerie, M.L.A, Cornell U., Assoc Prof. of Practice, Landscape Architecture

В

Babcock, Gunnar, Doctor of Philosophy, SUNY University at Albany, Lecturer, Microbiology

Balog-Way, Dominic, PhD, King's College, London, Research Assoc., Communication

Bandler, David, MS, Cornell University, Prof. Emeritus, Food Science

Barbano, David, Ph.D., Cornell U., Prof., Food Science

Barbash, Daniel, Ph.D., University of California, Prof., Molecular Biology & Genetics

Barrett, Kathryn, Master of Arts Teaching, Cornell University, Extension Assoc. Sr, Animal Science

Barstow, Buz, Ph.D., Cornell U., Prof Assoc, Biological & Environmental Engr

Bassuk, Nina, Ph.D., University of London, Prof Emeritus, School of Integrative Plant Science

Basu, Sumanta, Ph.D., U. of Michigan., Prof Assoc, Biology Stats & Computational Biol

Bates, Terry, Ph. D., Pennsylvania State University , Research Assoc. Sr, School of Integrative Plant Science

Batt, Carl, Ph.D., Rutgers U., Prof., Food Science

Bauerle, Taryn, Ph.D., Pennsylvania State U., Prof., School of Integrative Plant Science

Bazarova, Natalie, Ph.D., Cornell U., Prof., Communication

Beer, Steve, Ph.D., University of California, Davis, Prof Emeritus, School of Integrative Plant Science

Bell, Andrew, Ph.D., University of Michigan, Prof Assoc, Global Development

Bemis, Willy, Ph. D., Berkeley, Prof., Ecology & Evolutionary Biology

Benanav, Aaron, Ph.D., University of California, Los Angeles, Prof Asst, Global Development

Bentolila, Stephane, Ph.D., Université Claude Bernard , Assoc Research Prof., Molecular Biology & Genetics

Bergstrom, Gary, Ph.D., University of Kentucky, Prof Emeritus, School of Integrative Plant Science

Bershaw, Dwayne, M.S., U. of California, Davis., Lecturer Sr, Food Science

Bezner Kerr, Rachel, Ph.D., Cornell U., Prof., Global Development

Bihn, Elizabeth, PhD, Cornell University, Extension Assoc. Sr, Food Science

Birkeland, Jennifer, M.L.A, Harvard U., Prof Asst, Landscape Architecture

Björkman, Thomas, Ph.D., Cornell University, Prof Emeritus, School of Integrative Plant Science

Blake-Hodek, Kristina, Ph.D., Cornell University, Lecturer Sr, Molecular Biology & Genetics

Blasini, Davis, PhD, Arizona State University, PSA Spanish-Language Extension Assoc., Food Science

Blossey, Bernd, Ph.D., Christian-Albrechts U. (Germany)., Prof., Natural Resources

Bogdanove, Adam, Ph.D., Cornell U., Prof., School of Integrative Plant Science

Boisclair, Yves, Ph.D., Cornell U., Prof., Animal Science

Bolton, Bryson, Master of Science, Cornell University, Lecturer, Food Science

Bonhotal, Jean, Master of Science, SUNY Binghamton, Extension Assoc. Sr, School of Integrative Plant Science

Bonter, David, PhD, University of Vermont, Extension Assoc. Sr, Natural Resources

Boor, Kathryn, PhD, University of California Davis, Prof., Food Science

Booth, James, Ph.D., U. of Kentucky., Prof., Biometry and Statistics

Bowser, Christopher, Master (Generic), Clark University, Extension Assoc. Sr, Biological & Environmental Engr

Bradbury, Jack, Ph.D., Rockefeller Univ., Prof Emeritus, Neurobiology & Behavior

Brady, John, Ph.D., SUNY, Stonybrook., Prof., Food Science

Brandt, Steven, MPD, Professional Photographers of America, Lecturer, Communication

Bridgen, Mark, Ph.D., Virginia Polytechnic Inst. and State U., Prof., School of Integrative Plant Science

Brown, David, Ph.D., University of Wisconsin, Prof. Emeritus, Global Development

Brown, Susan, Ph.D., U. of California, Davis., Prof., School of Integrative Plant Science

Buchon, Nicolas, Ph.D., Universite d´Auvergne Clermont I France., Prof Assoc, Entomology

Buckler, Carlyn, Ph.D., U. of Missouri., Assoc Prof. of Practice, School of Integrative Plant Science

Buckley, Daniel, Ph.D., Michigan State U., Prof., Microbiology

Burton, Aisha, Doctor of Philosophy, Indiana University, Asst Research Prof., Microbiology

С

Cahoon, Richard, Ph.D., Cornell University, Adjunct Prof., Global Development

Caillaud, Marina, PhD, University Paris XI, Lecturer, Entomology

Campagna, Leonardo, Ph.D., University of Buenos Aires, Research Assoc. Sr, Lab of O - Administration

Cápiro, Natalie, Doctorate (Generic), Rice University, Prof Asst, Biological & Environmental Engr

Casteel, Clare, Ph.D., University of Illinois at Champaign-Urbana, Prof Assoc, School of Integrative Plant Science

Catala, Carmen, Ph.D., Universitat de Valencia, Research Assoc. Sr, School of Integrative Plant Science

Cerra, Josh, M.L.A, U. of Minnesota., Prof Assoc, Landscape Architecture

Chabot, Brian, Ph.D. , Duke Univeristy, Prof Emeritus, Ecology & Evolutionary Biology

Charles, Michael, Ph.D., Ohio State U., Prof Asst, Biological & Environmental Engr

Chen, Chang, PhD, University of California Davis, Prof Asst, Food Science

Chen, Shiyan, Ph.D., Chinese Academy of Sciences, Research Assoc., School of Integrative Plant Science

Cheng, Lailiang, Ph.D., Oregon State U., Prof., School of Integrative Plant Science

Cherney, Jerry, Ph.D., U. of Minnesota., Prof., School of Integrative Plant Science

Cherney, Debbie, R., U. of Florida., Prof., Animal Science

Chia, Ju-Chen, Ph.D., National Taiwan University, Research Assoc., School of Integrative Plant Science

Cleavitt, Natalie, PhD, University of Alberta, Research Assoc. Sr, Natural Resources

Clements, Donna, MS, University of Maryland, Extension Assoc. Sr, Food Science

Coffman, Ronnie, Ph.D., Cornell University, Prof Emeritus, School of Integrative Plant Science

Cooch, Evan, Ph.D., Queen's U. (Canada)., Prof Assoc, Natural Resources

Cornejo, M., PhD, UC Santa Barbara, Prof Asst, Communication

Cox, Kerik, Ph.D., U. of Georgia., Prof., School of Integrative Plant Science

Crepet, William, Ph.D., Yale U., Prof., School of Integrative Plant Science

Crickard, John, Ph.D., Pennsylvania State University, Prof Asst, Molecular Biology & Genetics

Curtis, Paul, Ph.D., North Carolina State U., Prof., Natural Resources

Czymmek, Karl, Doctor of Law, SUNY at Buffalo, Extension Assoc. Sr, Animal Science

D

Daeschel, Devin, PhD, Cornell University, Postdoctoral Assoc., Food Science

Daly, Sarah, PhD, Purdue University, Postdoctoral Assoc., Food Science

Dando, Robin, Ph.D., U. of South Florida., Prof., Food Science

Danforth, Bryan, Ph.D., U. of Kansas., Prof., Entomology

Datta, Ashim, Ph.D., U. of Florida., Prof., Biological & Environmental Engr

Daughtrey, Margery, Master of Science, University of Massachusetts, Extension Assoc. Sr, School of Integrative Plant Science

D'Aversa, Ria, Master of Science, University of California, Lecturer, School of Integrative Plant Science

Davidson, Anna, PhD, University of California-Davis, Research Assoc. Sr, Natural Resources

Davies, Peter, Ph.D., University of Reading, Prof Emeritus, School of Integrative Plant Science

De Jong, Walter, Ph.D., U. of Wisconsin, Madison., Prof., School of Integrative Plant Science

Degaetano, Arthur, Ph.D., Rutgers U., Prof., Earth and Atmospheric Science

Dhondt, Andre, Ph.D., U. of Ghent, Prof., Ecology & Evolutionary Biology

Dietz, Shelby, Ph.D., Harvard, Lecturer Sr, Neurobiology & Behavior

Dillman, Casey, Ph.D. , Saint Louis University, Research Assoc. Sr, Ecology & Evolutionary Biology

DiTommaso, Antonio, Ph.D., McGill U. (Canada). , Prof., School of Integrative Plant Science

Doerr, Tobias, Ph.D., Northeastern U., Prof Assoc, Microbiology

Dombroskie, Jason, PhD, University of Alberta, Extension Assoc. Sr, Entomology

Dougherty, Christopher, Doctorate (Generic), California Institute of Technology, Research Assoc.-SP, Biological & Environmental Engr

Doyle, Jeffrey, Ph.D., Indiana U., Prof., School of Integrative Plant Science

Drinkwater, Laurie, Ph.D., U. of California, Davis., Prof., School of Integrative Plant Science

Duan, Ellie, Ph.D., U. of Connecticut., Prof Asst, Animal Science

Dudley, Mary, Ph.D., Cornell U., Extension Assoc. Sr, Global Development

Duffy, Brooke, Ph.D., U. of Pennsylvania, Prof Assoc, Communication

Dulal, Hari, Ph.D., Tokyo Medical & Dental University, Research Assoc.-SP, Animal Science

Duplais, Christophe, Ph.D., U. of Cergy-Pontoise, Prof Assoc, Entomology

Durst, Richard, PhD, Massachusetts Institute of Technology, Prof. Emeritus, Food Science

Ε

Earle, Elizabeth, Ph.D., Harvard University, Prof Emerita, School of Integrative Plant Science

Eccleston, Jill, Ph.D., Cornell University, Research Assoc., School of Integrative Plant Science

Edwards, Katie, Doctor of Philosophy, Cornell University, Adjunct Asst. Prof., Microbiology

Ellwood, Ian, Ph.D., MIT, Prof Asst, Neurobiology & Behavior

Eloundou-Enyegue, Parfait, Ph.D., Pennsylvania State U., Prof., Global Development

Emery, Sara, PhD, University of California at Davis, Prof Asst, Entomology

Enbody, Erik, PhD, Tulane University, Prof Asst, Computational Biology

Enid Martinez, Carmen, Ph.D., Rutgers State University, Prof., School of Integrative Plant Science

Erickson, Eugene, Ph.D., Michigan State University, Prof. Emeritus, Global Development

F

Feaga, Heather, Ph.D., Pennsylvania State U., Biochemistry and Molecular Microbiology, Prof Asst, Microbiology

Feschotte, Cedric, Ph.D., Université Pierre & Marie Curie,, Prof., Molecular Biology & Genetics

Fieweger, Rachel, Doctor of Philosophy, Cornell University, Adjunct Asst. Prof., Microbiology

Fink, Daniel, Ph.D., Cornell University, Research Assoc. Sr, Lab of O - Administration

Fisher, Lucy, MS, Cornell University, Extension Assoc. - SP, Global Development

Fitzpatrick, John, Ph.D., Princeton University, Prof Emeritus, Ecology & Evolutionary Biology

Flecker, Alexander, Ph.D., University of Maryland, Prof., Ecology & Evolutionary Biology

Frank, Margaret, Ph.D., Cornell U., Prof Assoc, School of Integrative Plant Science

Friso, Giulia, Ph.D., University of Padua, Lecturer Sr, School of Integrative Plant Science

Fromme, Chris, Ph.D., Harvard University, Prof., Molecular Biology & Genetics

Fry, William, Ph.D., Cornell University, Prof Emeritus, School of Integrative Plant Science

Fuchs, Marc, Ph.D., U. Louis Pasteur (France)., Prof., School of Integrative Plant Science

Fussell, Susan, PhD, Columbia University, Prof., Communication

G

Gaballa, Ahmed, Doctor of Philosophy, Vrije University Brussels, Research Assoc. Sr, Microbiology

Gallagher, Kelley, Doctor of Philosophy, San Diego State University -California State University, Prof Asst, Microbiology

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