

Academic Standing

Full-time students are expected to remain in good academic standing. The criteria for good standing change somewhat as a student progresses through the four years of the engineering curriculum. At all times, the student must be making adequate progress toward a degree, but what this actually means varies from Major to Major.

Requirements for students not yet affiliated with a Major are listed below. Failure to meet these standards will result in a review by the Committee on Academic Standards, Petitions, and Credit (ASPAC), which may issue a warning or a stern warning and may require a student to take a leave of absence or even withdraw from the college.

For freshman engineering students to be in good standing at the end of the first semester, they must have

1. at least 12 credits, including at least two courses in mathematics, science, or engineering;
2. at least C- in the mathematics course;
3. a semester GPA \geq 2.0 or higher;
4. no F, U, or INC grades.

For second-semester freshmen and first-semester sophomores to be in good standing, they must have

1. at least 14 credits per semester in courses that meet engineering degree requirements;
2. at least C- in the mathematics course;
3. a semester GPA \geq 2.0;
4. no F, U, or INC grades.

Because mathematics is pivotal to the study and practice of engineering, stu-

dents must earn at least C- in MATH 191 (or 190), 192, 293, and 294. Students failing to meet this standard must repeat the course immediately and receive a satisfactory grade before enrolling in the next course in the sequence. Failure to achieve at least C- the second time around will generally result in dismissal from the College of Engineering. Physics and advanced mathematics courses often have mathematics prerequisites, and having to repeat the prerequisite course may delay progress in the physics and mathematics curricula.

Some of the requirements for good standing in Majors are listed below; complete and up-to-date information is available from the undergraduate consultant for their Major.

The university requirement for full-time status (for financial aid) is a minimum of 12 credits, but students who believe they have a good reason to carry a lighter course load should see their faculty advisor and the undergraduate consultant for their Major or intended Major beforehand. Students may have to postpone graduation or attend summer classes as a result of reducing their course load.

Criteria for Good Standing in Major Programs

Affiliated students must continue to meet college requirements for good standing as described earlier in this section. In addition, they must meet the following criteria to remain in good standing in their chosen major program:

Biological Engineering

(Criteria for students during the time they are registered in the College of Engineering as their primary college)

1. Semester GPA \geq 2.0

2. Cumulative GPA \geq 2.0
3. Semester GPA \geq 2.0 in biological and environmental engineering courses and engineering distribution courses
4. A passing grade in at least 12 credits each semester
5. No failing grades

Chemical Engineering

1. Cumulative GPA \geq 2.2
2. Semester GPA \geq 2.0
3. GPA \geq 2.2 each semester in required chemical engineering courses
4. Accumulation of at most one grade below C- in required chemical engineering courses during the undergraduate program
5. No failing grades

Civil Engineering

1. Semester GPA \geq 2.0
2. Cumulative GPA \geq 2.0
3. Semester GPA \geq 2.0 in Core Courses, Design Courses, Major-approved electives, and Engineering Distribution Courses.
4. At most one grade below C- in required Core Courses, Design Courses, Major-approved electives, and Engineering Distribution Courses.
5. 12 credits hours each semester
6. No failing grades

Computer Science

1. Semester GPA \geq 2.3
2. Semester GPA \geq 2.7 in courses required for the COM S major program, with no course grade less than C-
3. No failing grades
4. A passing grade in at least 14 credits

each semester

Electrical and Computer Engineering

1. Semester GPA \geq 2.3
2. No course with a grade of less than C- may be used to satisfy degree requirements in the major program or serve as a prerequisite for a subsequent electrical and computer engineering course.
3. Students must satisfactorily complete ECE/ENGRD 210, ECE 215, all math and physics courses through MATH 294 and PHYS 214 by the end of the first semester in the major program of Electrical and Computer Engineering (typically the second semester of the sophomore year) and make adequate progress toward the degree in subsequent semesters.

Engineering Physics

1. Semester GPA \geq 2.3
2. At least C- in all required courses
3. No failing grades

Environmental Engineering

(Criteria for students during the time they are registered in the College of Engineering as their primary college)

1. Semester GPA \geq 2.0
2. Cumulative GPA \geq 2.0
3. Semester GPA \geq 2.0 in Core Courses, Design Courses, Major-approved electives, and Engineering Distribution Courses.
4. At most one grade below C- in required Core Courses, Design Courses, Major-approved electives, and Engineering Distribution Courses.
5. 12 credits hours each semester
6. No failing grades

Geological Sciences

1. Cumulative and semester GPA \geq 2.0
2. At least C- in all required courses

Independent Major

1. A passing grade in at least 12 credits each semester
2. Accumulation of no more than one grade below C- in required Independent Major or minor courses during the undergraduate program
3. Semester GPA \geq 2.0
4. Cumulative GPA \geq 2.0

Information Science, Systems, and Technology

1. Semester GPA \geq 2.0
2. Semester GPA \geq 2.3 in required ISST courses
3. At least C- in ENGRD 211, ENGRD 270, and all required ISST Major courses
4. Satisfactory progress (a minimum of 14 credits per semester)
5. No failing grades

Materials Science and Engineering

1. Semester GPA \geq 2.0
2. Cumulative GPA \geq 2.3 with no grade below C in the department's core curriculum
3. Completion of ENGRD 261 or 262 with a minimum grade of C before affiliation

Mechanical Engineering

1. A passing grade in at least 12 credits each semester, with the exception of the final semester
2. Semester GPA \geq 2.0 with no grade below C- in the following courses

counting toward major program requirements: ENGRD 202, ENGRD 203, ENGRD 221, M&AE 212, M&AE 225, M&AE 323, M&AE 324, M&AE 325, M&AE 326, M&AE 327, and M&AE 378.

3. Satisfactory progress toward the requirements for graduation

Operations Research and Engineering

1. Cumulative GPA \geq 2.0
2. Cumulative GPA \geq 2.0 in required Operations Research and Engineering courses
3. At least C- in ENGRD 211, ENGRD 270, and all required Operations Research and Engineering major courses
4. Satisfactory progress (a minimum of 12 credits per semester)
5. No failing grades

Academic Actions

At the end of each semester the records of all students who have not yet joined a Major are reviewed by the faculty committee on Academic Standards, Petitions, and Credit (ASPAC), and the records of students who have joined a Major are reviewed by faculty committees in those areas. Students who fail to meet the conditions for good standing may receive written warnings, a required leave of absence, or be withdrawn from the college.

A warning should be taken very seriously. If a student receives a warning and their performance continues to be unsatisfactory, the student may be dropped from the degree program. Poor performance also diminishes a student's prospects for employment or graduate school. Students should determine what their underlying difficulties are and address them, perhaps with the help of their faculty advisor or the staff in Engineering

Advising.

When students fail to make adequate progress in a technical subject in a given semester, the review committee may require them to take time off to improve their understanding of the areas in which they are having difficulty. This is known as a required leave of absence. It will result in a postponement of graduation, but it can be regarded as an opportunity to address academic deficiencies before rejoining the engineering degree program. Students on a required leave of absence are not usually permitted to enroll in courses at Cornell, and they may choose to go to other institutions to retake the courses that caused them difficulty. After a required leave of absence, students are allowed to return to the engineering program but are required to repeat the courses that were not satisfactorily completed before their leave—courses taken elsewhere are not counted toward graduation unless special permission is granted by ASPAC (or the Major, for affiliated students). Any exceptions to these rules must be requested in writing to the ASPAC committee (or, for affiliated students, to the undergraduate consultant of their Major).

Occasionally, the faculty committee decides that a student is having such basic academic problems that they should leave the engineering program. This action is generally permanent. Students in this situation may wish to investigate other majors at Cornell—the Career Counseling Office in Barnes Hall is an excellent resource, as is the Internal Transfer Division in Day Hall. Students who want to continue their study of engineering are advised to seek admission to a different college or university.

Academic Integrity

A pamphlet titled Code of Academic Integrity and Acknowledging the Work of Others is distributed to new and transfer students and is also available on the web at www.cornell.edu/UniversityFaculty/docs/main.html. The code also appears

(along with other campus policies) in the Policy Notebook for the Cornell Community, which is published by the Office of the Dean of Students and distributed to new students.

The following is taken directly from the code (refer to the documents mentioned above for the entire code): "Absolute integrity is expected of every Cornell student in all academic undertakings. . . Academic integrity is expected not only in formal course work situations, but in all university relationships and interactions connected to the educational process, including the use of university resources. A Cornell student's submission of work for academic credit indicates that the work is the student's own. All outside assistance should be acknowledged, and the student's academic position truthfully reported at all times. In addition, Cornell students have a right to expect academic integrity from each of their peers."

The authority to determine whether a specific action shall be treated as a violation of the Code of Academic Integrity lies with the Academic Integrity Hearing Board. Those who violate the Code of Academic Integrity will be subject to penalties under this code and may also be subject to penalties under state and federal laws.

Students and staff members discovering an apparent violation should report the matter to the faculty member in charge of the course or to the chairperson of the appropriate Hearing Board. Procedures for dispensing of alleged academic integrity violations are outlined in the code.

Class Ranking

Each summer the engineering registrar ranks the engineering students by class (i.e. juniors, seniors). The ranking takes into account all degree-applicable grades received for enrolled students up to the time of the ranking. Seniors graduating in

May be ranked immediately after graduation. Changes in grades made after ranking is completed do not affect the class rank of other students.

Dean's List

Dean's List citations are presented each semester to engineering students with exemplary academic records. The criteria for this honor are determined by the dean of the college.

For 2004-2005, the requirement is a semester GPA ≥ 3.40 or higher (without rounding); no failing, unsatisfactory, missing, or incomplete grades (even in physical education); and at least 12 letter-grade credits (not S/U). Students may earn Dean's List status retroactively if they meet these criteria after making up incompletes. Students who make the Dean's List receive certificates from the Engineering Registrar's office, and the honor is noted on their transcript.

Graduating with Distinction and Field Honors Programs

Graduating with Distinction

Meritorious students graduating with a Bachelor of Science degree from the College of Engineering may also be designated cum laude, magna cum laude, or summa cum laude.

Cum laude will be awarded to all engineering students with an overall grade point average (GPA) ≥ 3.50 . Cum laude will also be awarded to all engineering students who received a semester GPA ≥ 3.50 in each of the last four semesters of attendance at Cornell; in each of these semesters, at least 12 letter-grade credits must be taken with no failing, unsatisfactory, missing or incomplete grades. If the student is an Engineering Co-op student, then the Engineering Co-op summer term will count as one of the last four. Students who were approved for pro-rated tuition in their final semester will be awarded

cum laude if they received a semester GPA ≥ 3.50 in their last semester and meet the conditions above in the prior four semesters.

Magna cum laude will be awarded to all engineering students with an overall GPA ≥ 3.75 (based on all credits taken at Cornell).

Summa cum laude will be awarded to all engineering students with an overall GPA ≥ 4.0 (based on all credits taken at Cornell).

Note: All GPA calculations are minimums and are not rounded.

Major Honors Programs

To be eligible for major honors, a student must enter the program with and maintain a cumulative GPA > 3.50 . If the student's Major has an approved honors program and the GPA, Bachelor of Science degree, and major honors program requirements are fulfilled, the faculty of the major may recommend that a student graduate with the additional diploma and transcript notation of "With Honors". (Additional criteria for the individual major honors programs follow.)

Biological Engineering (BE) Honors Program

At least 9 credits beyond the minimum required for graduation in BEE or EnvE. These 9 credits shall be drawn from one or more of the following with at least 6 credit hours in the first category:

- A significant research experience or honors project under the direct supervision of a BEE faculty member using BEE 495, BE Honors Research. A written senior honors thesis must be submitted as part of this component. A minimum grade of A- is required for successful completion of the honors requirement.
- A significant teaching experience under the direct supervision of a faculty member or as part of a regularly recognized course in the department (i.e., BEE 151, 251, or 260) under BEE 498,

Undergraduate Teaching.

- Advanced or graduate courses. These additional courses must be technical in nature (i.e., in engineering, mathematics, biology, chemistry, and physics at the 400 and graduate level).

Timing: All interested students must complete a written application (available in 207 Riley-Robb Hall) no later than the end of the third week of the first semester of the senior year but are encouraged to make arrangements with a faculty member during the second semester of their junior year. A student must be in the program for at least two semesters before graduation.

Procedures: Each applicant to the BE honors program must have a BEE faculty advisor to supervise the honors program. A written approval of the faculty member who will direct the research is required. After the college verifies the student's GPA, the student will be officially enrolled in the honors program.

Civil Engineering (CE) Environmental Engineering (EnvE) Honors Program

A CE or EnvE honors program consists of at least 9 credits beyond the minimum required for graduation in CE or EnvE. These 9 credits shall be drawn from one or more of the following components (with no fewer than 2 credits in any selected component):

1. A significant research experience or honors project under the direct supervision of a CEE faculty member using CEE 400: Senior Honors Thesis (1-6 credits per semester). A significant written report or senior honors thesis must be submitted as part of this component. Letter grade only.
2. A significant teaching experience under the direct supervision of a faculty member or as part of a regularly recognized course in the College of

Engineering (i.e., ENGRG 470: Undergraduate Engineering Teaching or CEE 401: Undergraduate Teaching in CEE [1-3 credits per semester]).

3. Advanced or graduate courses at the 500 level or above.

No research, independent study, or teaching for which the student is paid may be counted toward the honors program.

Timing: Interested students must apply no later than the beginning of the first semester of their senior year but are encouraged to apply as early as the first semester of their junior year. All honors program students must be in the program for at least two semesters before graduation.

Procedures: Each applicant to the CE Honors Program must have a faculty advisor or faculty member to supervise the student's individual program. (This need not be the student's faculty advisor.) The application to the program shall be a registration form for CEE 400 and a letter from the student describing the specific proposed honors program and include the explicit approval of both the faculty advisor and honors advisor. Each program must be approved by the CE Curriculum Committee, although the committee may delegate approval authority to the associate director for all but unusual proposals.

Computer Science (COM S) Honors Program

1. Complete at least one COM S course (3+ hours per course) at or above the 500-level with at least A- (no seminars or two-credit project courses).
2. Complete at least two 3-credit semesters of COM S 490 (Independent Research) with a COM S faculty member with at least A- each semester.

Content: Honors courses may not be used to satisfy the COM S electives, the COM S project course, the math elective, the technical electives, or courses in the

specialization. In essence, honors course work represents a depth of major work that is well beyond the minimum requirements needed to fulfill the major.

Timing: Honors determinations are made during the senior year. Students wanting to be considered for major honors should notify the undergraduate office in the Department of Computer Science at ugrad@cs.cornell.edu. The subject line for this message should read "HONORS TRACK". Related questions may also be addressed to the same e-mail address, or candidates can call or stop by 303 Upson Hall, 255-0982.

Preparation: Arrangements for doing COM S 490 projects should be made directly with faculty members in the department. Students are encouraged to discuss potential contacts with their advisors and/or browse the department's web page at www.cs.cornell.edu/ugrad for specific leads on research opportunities.

The Department of Computer Science reserves the right to make changes to the honors program at any time. Generally speaking, all members of the same graduating class in COM S will be subject to the same honors criteria.

Electrical and Computer Engineering (ECE) Honors Program

Provides additional advanced course work and interaction with the ECE faculty. It is highly regarded by graduate schools and employers. To participate in an Honors program at Cornell, you must:

- Apply during the first 3 weeks of the sixth semester.
- Accumulate at least 137 credit hours for graduation, which includes the basic ECE degree requirements as well as Honors Program courses (9 credit hours).
- Achieve a B or better in the 3 required courses.
- Enroll in the Honors Seminar (ECE

311) during the junior year for 2 credits and a letter grade.

- Complete a senior year Honors Project (3 credit hours minimum). This project can include research or directed reading, at the 400 level, with an ECE faculty member.
- Earn at least 3 additional credit hours of advanced ECE course work. This course must have at least a 300-level ECE course prerequisite.

Engineering Physics (EP) Honors Program

1. Complete at least 8 credits of Major-approved electives at the 400 level or higher and receive at least an A- in each of the courses taken to fulfill this 8-credit requirement. These 8 credits are in addition to the credits obtained by completing the senior thesis or special project requirement as discussed in item 2.
2. Enroll in A&EP 490 or an equivalent course over two semesters for the purpose of completing an independent research project or senior thesis under the supervision of a Cornell engineering or science faculty member. The minimum enrollment is 2 credits in the first semester and 4 credits in the second. The level of work required for a successful completion of this project or thesis is to be consistent with the amount of academic credit granted.

Timing: Interested students must complete a written application no later than the end of the third week of the first semester of the senior year but are encouraged to make arrangements with a faculty member during the second semester of their junior year. A student must be in the program for at least two semesters before graduation.

Procedures: Before enrolling in A&EP 490, or the equivalent, the honors candidate must submit a brief proposal outlin-

ing the topic and scope of the proposed project or thesis and a faculty supervisor's written concurrence to the associate director for undergraduate studies. This proposal will be reviewed by the EP Honors Committee and either approved or returned to the candidate to correct deficiencies in the proposal. The proposed research project or senior thesis is to consist of a research, development, or design project and must go beyond a literature search. The final steps in completing the honors project are a written and oral report. The written report is to be in the form of a technical paper with, for example, an abstract, introduction, methods section, results section, conclusions section, references, and figures. This report will be evaluated by the faculty supervisor and the chair of the EP Honors Committee. Following the completion of the written report, an oral report is to be presented to an audience consisting of the faculty supervisor, the chair of the Honors Committee, and at least one other departmental faculty member, along with the other honors candidates. The final research project course grade will be assigned by the faculty supervisor, following the oral presentation and after consultation with the chair of the Honors Committee. At least A- is required for successful completion of the honors requirement.

Geological Sciences (GEOS) Honors Program

1. Take at least 9 credits above the minimum required for graduating and approved by the Major advisor;
2. Have a written proposal of the honors project accepted by their faculty advisor and the director of undergraduate studies;
3. Complete an honors thesis (EAS 491-492 or 499, at least 2 credits each) involving research of breadth, depth, and quality.

Timing: A student interested in completing an honors thesis must by the beginning of the seventh semester, have a written proposal of the honors project accepted by their advisor and the director of undergraduate studies.

Procedures: Each applicant to the Geological Sciences honors program must have a faculty advisor to supervise the honors program. Written approval by the faculty member who will direct the research is required. After the college verifies the student's GPA, the student will be officially enrolled in the honors program.

Independent Major (IM) Honors Program

1. Complete at least 9 credits above the minimum required for graduation, from courses selected at the advanced or graduate level (excluding credits awarded for research) and approved by the Major advisor;
2. Have a written proposal of the honors project accepted by the major advisor and the Independents Major Committee by the beginning of the seventh semester.
3. Complete an honors thesis involving research of breadth, depth, and quality and demonstrating professional communication skills.

Information Science, Systems, and Technology (ISST) Honors Program

1. Eight credit hours of IS graded course work at least at the 500-level (no seminars or two-credit project courses.)
2. Six credit hours of INFO 490 independent study and research with an IS faculty member, spread over two semesters, with grades at least A-

OR

Three credit hours of INFO 490 with an IS faculty member and three credit hours of INFO 491 teaching experience, both with grades at least A-. It is expected

that the INFO 490 research will result in either a programming project and/or a written report. 500- or 600- level courses taken to fulfill the honors requirement may be counted toward fulfillment of the primary or associated option requirements.

Materials Science and Engineering (MS&E) Honors Program

In addition to the basic requirements mentioned previously, honors candidates in the major of Materials Science and Engineering must

1. Take at least 9 credits above the minimum required for graduation in Materials Science and Engineering, so that the minimum number of credits for an honors degree is 140. These additional courses must be technical in nature, i.e., in engineering, mathematics, chemistry, and physics at the 400 and graduate levels, with selected courses at the 300 level, which must be approved by the Major advisor.
2. Write a senior honors thesis (8 credits) with a grade of at least A.

Note: Undergraduates typically enter the honors program at the beginning of their senior year (seventh semester) and must have a cumulative GPA > 3.50 at that point.

Timing: All interested students must complete a written application no later than the end of the third week of the first semester of their senior year but are encouraged to make arrangements with a faculty member during the second semester of their junior year. A student must be in the program for at least two semesters before graduation.

Procedures: Each applicant to the Materials Science and Engineering honors program must have a faculty advisor to supervise the honors program. Written approval by the faculty member who will direct the research is required. After the college verifies the student's GPA, the student will be officially enrolled in the honors program.

Operations Research and Engineering (ORE) Honors Program

An Operations Research and Engineering honors program shall consist of at least 9 credits beyond the minimum required for graduation in ORE, so that no part of the honors program can also be used to satisfy graduation requirements. The 9 credits shall be from one or more of the following with at least four hours from the first category:

1. Advanced courses in OR&IE at the 500 level or above.
2. A significant research experience or honors project under the direct supervision of an OR&IE faculty member using OR&IE 499: OR&IE Project. A significant written report must be submitted as part of this component.
3. A significant teaching experience under the direct supervision of a faculty member in OR&IE using OR&IE 490: Teaching in OR&IE or ENGRG 470: Undergraduate Engineering Teaching.

Timing: Interested students must complete a written application no later than the end of the third week of the first semester of their senior year but are encouraged to make arrangements with a faculty member during the first semester of their junior year. A student must be in the program for at least two semesters before graduation.

Procedures: Each applicant to the ORE honors program must have a faculty advisor to supervise the honors program. The honors advisor need not be the student's faculty advisor. The application to the program shall be a letter from the student describing the specific proposed honors program and include the explicit approval of the honors advisor. Each program (as well as any subsequent changes to the program) must be approved by the associate director of undergraduate studies.