ENGINEERING | HERBERT WERTHEIM COLLEGE OF

Established in 1910, the Herbert Wertheim College of Engineering is the largest professional school, the second-largest college and one of the three largest research units at the University of Florida. The curricula is designed to produce highly skilled engineers and provide each student with a broad range of degree and career choices.

Contact

312 Weil Hall
1949 Stadium Road or
P.O. Box 116550
University of Florida
Gainesville, FL 32611-6550

352.392.2177

Map (http://campusmap.ufl.edu/?loc=0024) More Info (http://www.eng.ufl.edu/)

Academic Advising and Career Coaching
Center for Student Excellence
204 Weil Hall
352.392.0944

Established

1910

Programs

A four-year undergraduate program and combination-degree program with joint award of bachelor's and master's degrees in 15 engineering specializations.

Degrees

Bachelor of Science, Master of Science, Master of Civil Engineering, Master of Engineering, Doctorate.

Academic Advising

First Year students receive academic advising through the Center for Student Excellence. All first year students complete a required First Year Engineering Advising course designed to teach them how to navigate their academic planning and successfully transition from high school to college. Students who successfully complete their first year are transitioned to their major department for advising in their second year and beyond. All engineering students must contact an academic advisor before registering for classes each semester.

Scholarships

Scholarship awards are made each year for the following academic year and are based on demonstrated need and scholastic performance. Students are notified by Undergraduate Student Affairs when applications become available.

Internships and Career Guidance

Professional development guidance is available from academic advisors, faculty, and the Career Connections Center. Visit the Career Connections Center in the J. Wayne Reitz Student Union.
Map (http://campusmap.ufl.edu/?loc=0686) More Info (https://career.ufl.edu/)

College Mission

The Herbert Wertheim College of Engineering fosters and provides world-class programs in engineering education, research, and service to enhance the economic and social well-being of the citizens of Florida, the nation, and the world.

Graduates of the Herbert Wertheim College of Engineering at the University of Florida will exhibit the following in pursuit of their profession:

- Vision, as evidenced by an ability to use creative approaches to problem solving.
- Values, as evidenced by an understanding of the importance of employing strong professional ethics.
- Leadership, as evidenced by serving as:

  - A team/project leader with solid project management and planning skills
  - A mentor to less experienced staff
  - A volunteer in the community.
- Professional expertise, as evidenced by:
  - Making meaningful contributions to technical engineering problem solving as both an individual contributor and in team situations
  - Continually enhancing both technical and non-technical skills
  - Applying professional expertise to increasingly complex problems/projects
  - Effective communications skills, both verbal and written
  - Knowledge about the interaction of financial, societal, legal, or cultural influences with science and technology.

Accreditation

For information about a specific major, please refer to the departmental webpage, contact the undergraduate coordinator in the department, or visit the Center for Student Excellence in room 270 of the Herbert Wertheim Laboratory for Engineering Excellence.

Engineering Undergraduate Student Affairs

Engineering student services are provided through Engineering Undergraduate Student Affairs located in 312 Weil Hall, 204 Weil Hall (http://campusmap.ufl.edu/?loc=0024), and 270 WERT (https://www.eng.ufl.edu/about/transformation/herbert-wertheim-laboratory-for-engineering-excellence/). Engineering Undergraduate Student Affairs is responsible on a college-wide basis for coordinating academic advising, and for developing and implementing other student support programs and services, including success workshops, tutoring and mentoring, retention efforts, and new student programs.

The division informs students of educational opportunities such as scholarships, co-op and internship opportunities, and available campus resources. The division also serves as liaison between the Herbert Wertheim College of Engineering and university-wide student services and facilities.

First Year Academic Advising and Career Coaching

First year engineering students receive individualized academic, career, and personal coaching from the Herbert Wertheim College of Engineering's professional academic advisors in the comprehensive First Year Advising program. One-on-one and small group sessions are offered to assist students in identifying majors, resources, and opportunities that will enhance their personal, professional, and academic goals. Engineering Peer Advisors are also available to answer questions, discuss student organizations and design teams, and provide mentoring to new students. The Engineering Center for Student Excellence is located in 270 WERT (https://www.eng.ufl.edu/about/transformation/herbert-wertheim-laboratory-for-engineering-excellence/).

First Year College Transition Program

STEP-UP is a multifaceted bridge program designed to promote academic and personal success among entering engineering students throughout their first year (Summer B, Fall, and Spring). This program combines faculty and peer mentoring with team-building, industry involvement, and academic enhancement classes in engineering foundation courses. An engineering design component provides the opportunity to apply foundational concepts in problem-solving, team-building, and interpersonal communications.

Helpful Links

- College Website (https://www.eng.ufl.edu/)
- Combination Degrees (https://catalog.ufl.edu/UGRD/academic-advising/combined-degrees/)
- Computer Requirement (https://www.eng.ufl.edu/students/advising/fall-semester-checklist/computer-requirements/)
- Dean's List (https://catalog.ufl.edu/UGRD/academic-advising/academic-honors/#deanslisttext)

Academic Policies

Admission to the College

Preparation for Freshmen and Sophomores

The beginning engineering student should have a good understanding of the basic physical sciences, a demonstrated ability in mathematics, and the competence to read rapidly with comprehension.

Minimum high school preparation should include the basics outlined below. Students who need additional foundation courses can complete appropriate math and chemistry courses before proceeding with the regular engineering curriculum.

Refer to freshman admission for complete information.
More Info (https://catalog.ufl.edu/UGRD/admission/#freshmentext)

Essentials	Years
Intermediate and advanced algebra	1
Plane geometry	1
Trigonometry	1/2
Chemistry	1
Physics	1
Calculus	1

General Education

Students must complete General Education and prescribed foundation coursework in Mathematics and the Physical and Biological Sciences before pursuing junior or senior-level courses in the college. All courses used to satisfy General Education requirements must be taken for a letter grade and a minimum grade of C is required. Requirements of the Accreditation Board for Engineering and Technology (ABET) in General Education are satisfied by the university's General Education requirements.

Transfer from Florida State Colleges

Florida state college students who have completed the Associate of Arts degree and the required technical foundation courses in calculus, differential equations, chemistry, and physics with calculus are eligible to apply for transfer directly into the Herbert Wertheim College of Engineering. Admission to the college is selective and is based on the total record. Meeting the minimum requirements does not guarantee admission. Students with excessive withdrawals from coursework may not be eligible.

In particular, transfer students must meet the following minimum requirements:

- Earn an Associate of Arts degree from a Florida public state college with a minimum GPA of 2.00.
- Satisfy the General Education requirements of the state college and comply with the General Education requirements of UF and the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.
- Complete two sequential courses of foreign language in secondary school, or 8-10 semester credits at the post-secondary level, or document an equivalent level of proficiency.
- Satisfy critical-tracking criteria in accordance with specific program requirements and overall grade point average.
- Complete critical-tracking courses in calculus, differential equations, chemistry, and physics with calculus with minimum grades of C in each course and a minimum GPA specified for the intended major (as computed on the last of a maximum of two attempts allowed for each course, including withdrawals). Certain majors have higher minimum GPA requirements and may have additional critical tracking course requirements.

Upper Division Transfer from a Non-Florida State College

All students who transfer from four-year institutions must meet the general admission requirements of the university. In addition, students must meet the college's admission requirements to transfer directly into an engineering program. Students with 60 or more credits earned but less than 90 credits will be considered on a space-available basis.

Students with more than 90 credits earned and applying from a non-Florida state/public college are generally not considered for admission.

All students transferring to UF must complete a minimum of 60 credits of acceptable 3000/4000-level coursework at UF to receive a degree from this college.

Unless previous arrangements have been made for course certification by faculty of the Herbert Wertheim College of Engineering, only engineering courses taken in programs accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology will be considered for transfer to this college.

Transfer students are expected to graduate from the major to which they were admitted. Appeals to change majors after admission may not be approved.

Admitted students who do not enroll in the term for which they have been admitted must submit a new application by the deadline to be considered for a future term.

Postbaccalaureate Admission

A student who has received a baccalaureate degree who wants to meet specific requirements for admission to graduate school may be admitted as a postbaccalaureate student. Space is limited for postbaccalaureate study and only where space is available will admissions be made for postbaccalaureate studies.

INTERNATIONAL ENGINEERING PROGRAMS

HWCOE International Engineering Programs offers students the opportunity to participate in international experiences, through study, research, internship, and service learning abroad. Students can study abroad for a semester and take major classes or participate in a summer program to gain research or internship experiences. There are more than 40 semester-long exchange programs in more than 20 countries that offer engineering

classes in English to help students stay on track for their academic program. Credits earned in study abroad programs may count toward a major or minor and can satisfy General Education, language, and Summer residency requirements.

Every engineering student has a unique academic plan, and the college works with individual students to customize their international experience. For more information, visit https://www.eng.ufl.edu/international (https://www.eng.ufl.edu/international/) or talk to your academic advisor.

Academic Regulations

Credit for Special Work

- With department approval, a student can receive practical industry work experience under supervision. With a previously approved outline, a student can receive up to three college credits by submitting a satisfactory report.
- Students can receive credit for research work by registering for EGN 4912. See your academic advisor for details.
- A student cannot apply more than eight credits of individual study, including high honors projects, co-op work experience, practical work experience, and special problems or special topics, for credit toward a degree program.

CHANGE OF MAJOR

Changing Majors in Terms 1-5

Students who want to change to an engineering major in terms 1-2 must meet with an advisor in the HWCOE Center for Student Excellence. Students who want to change to an engineering major in terms 3-5 must meet with an advisor in the department that offers the desired major. [HWCOE Advisors (https://www.eng.ufl.edu/students/advising/who-is-my-advisor/)]

Students must meet the critical tracking criteria for their engineering major of choice. Those who are not on track may be permitted to change majors, provided they:

- Can get on track in a reasonable number of terms, as verified by an academic advisor;
- Demonstrate potential for success in the new major (successful completion of major courses according to HWCOE tracking requirements); and
- Meet all other HWCOE progression standards.

Changing Majors in Term 6 or Later

The further along a student is, the harder it will be to change majors and progress towards graduation in a timely fashion. Students wishing to change to a HWCOE major in term 6 or later must meet with an advisor in the department that offers the desired major.

In order to be considered for a major change at this late stage in their academic career, students must:

- Meet the critical-tracking criteria (preprofessional GPA and minimum cumulative UF GPA) for the major;
- Meet all other HWCOE progression standards for the desired major;
- Demonstrate potential for success in the major (successful completion of major and major-related courses according to HWCOE tracking requirements);
- Provide clear and purposeful reasons for which the change of major is appropriate; and
- Be able to graduate in a timely fashion.

Note that all of these criteria must be verified by an academic advisor.

Drop Policy

Students are allowed two drops in the first 60 credits of UF coursework and two drops in upper division (60 or more credits completed at UF).

College petitions (https://www.eng.ufl.edu/students/resources/undergraduate-student-handbook/petitions/) to drop courses beyond the allotted number will be approved only when circumstances beyond the student's control prevented the satisfactory completion of a course. All such petitions must be submitted to Engineering Undergraduate Student Affairs, along with a written recommendation from the student's department advisor.

English Requirement

Each student in the college is required to complete ENC 1101 or ENC 1102. All students must also complete an appropriate course in professional communication with a minimum grade of C.

Any instructor in the college may require a student with a deficiency in English to complete additional coursework beyond the curriculum requirements for the degree, with approval of the department chair.

Flexible Learning

An enrolled engineering student will not be permitted to register for flexible learning courses unless approved by the college. Engineering students interested in taking a flexible learning course must first consult with their academic advisor. The student must have a cumulative UF GPA of 2.0 or

better. A minimum grade of C is required for credit in a flexible learning course. The college will approve access to a maximum of two (2) Flexible Learning classes if the student meets at least one (1) of the following criteria:

- the student has a health concern;
- there are circumstances preventing the student from being on campus and the course is not offered online; or
- the student requires a flexible format solution for scholarship, tracking and/or graduation requirements.

More info (https://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/#academicpoliciestext)

Grievance Procedures

If a student feels that their performance in a course has not been evaluated accurately, the situation should be discussed with the instructor. If the disagreement is not resolved, the student can pursue the matter with the instructor's department chair, the associate dean for student affairs and the university ombudsman.

Honors and Accelerated Courses

Honors and accelerated courses can be taken in place of their regular tracking counterparts. A prerequisite for any college course can be met by an honors or accelerated equivalent. Accelerated physics and honors chemistry courses are not restricted to students in the honors program, but honors calculus courses are controlled by the university honors program. Currently approved substitutions include:

- MAC 3472 instead of MAC 2311
- MAC 3473 instead of MAC 2312
- MAC 3474 instead of MAC 2313
- PHY 2060 instead of PHY 2048
- PHY 2061 instead of PHY 2049

Independent Study

Under certain circumstances, credit toward graduation may be obtained through independent study by registering for a course carrying a department prefix. A student cannot apply more than eight credits of independent study toward a degree program, including *magna cum laude* or *summa cum laude* honors projects, co-op work experience, practical work experience, and special problems or special topics. Registration for one to four credits of variable credit in a semester requires department approval.

PETITIONS

Students who have an extenuating circumstance that prevents them from adhering to a college regulation may petition for an exception. The HWCOE petitions committee reviews petition requests weekly. All petitions must include a statement explaining the extenuating circumstance and provide supporting documentation.
More info (https://www.eng.ufl.edu/students/advising/fall-semester-checklist/undergraduate-student-handbook/petitions/)

Probation Policy and Dismissal

An undergraduate student whose university, upper-division, or department grade point average falls below 2.00 will be placed on academic probation. An undergraduate student who is off-track for their major will be placed on critical tracking probation. Students on probation will be allowed up to two semesters to attain good academic standing and are expected to make satisfactory academic progress in probation semesters. Students may not be on probation for more than two semesters during their undergraduate program. A student who fails to meet the conditions of probation must petition their department to be allowed to continue in the major. Approval of this petition is at the discretion of the student's department.

As a condition of probation, students must see an academic advisor at designated intervals to review progress toward meeting the conditions of probation. Failure to keep such appointments without valid reason will be considered a violation of probation and may result in dismissal from the program.

Students dismissed from the Herbert Wertheim College of Engineering should seek admission to another program.

Students should acquaint themselves with their department's probation and exclusion procedures and guidelines.

ROTC

Engineering students can enroll in the advanced ROTC programs offered by the Army, Navy, and Air Force. Advanced courses in military science are not normally acceptable credit as technical or nontechnical electives toward an engineering degree.

S/U Grade Option

All courses taken at the university to satisfy engineering degree requirements, General Education, and Writing Requirements must be taken for letter grade, unless the course is offered only on a satisfactory/unsatisfactory (S/U) basis. Nontechnical electives in the junior and senior years can be taken S/U with departmental approval.

Physical education courses taken when an engineering student has reached junior status must be taken S/U.

Students should check with their departments to determine policy.

Student Responsibility

It is the student's responsibility to review and consider all pertinent information about the university and the college. Special attention must be paid to required documentation and deadlines.

Summer Attendance

Students who have completed a summer study abroad program (at least 6 credits), co-op, internship, research experience, or other engineering-related work can petition to waive this requirement after they have earned 75 credits. All petitions must be submitted to the university petitions committee with all appropriate documentation.

Transient Study

Students should submit a transient form (https://www.floridashines.org/succeed-in-college/take-a-course-at-another-school/) via Floridashines.org to request permission to enroll at another institution and have the credits apply to their UF degrees.

More Info (https://www.eng.ufl.edu/students/transient-student/)

To be eligible for transient work, students must:

- Have a minimum 2.0 UF GPA;
- Be on-track for the current major; and
- Not break the residency requirement (Students MUST complete the last 25% of credits required for their degree continuously at UF).

Students who have already transferred 60 credits from a public/state college may not apply additional public/state college credits toward their degree.

Students must ensure that a final transcript is sent to UF after completion of the course(s). Grades for courses taken elsewhere will not be calculated into the UF GPA but may be considered as part of the preprofessional GPA used by critical tracking.

Withdrawal from the University

Students who want to drop all courses for any current term are able to do so via ONE.UF (https://one.uf.edu/) prior to the withdrawal deadline. Dropping the entire load constitutes withdrawal from the university.

Courses dropped via full term withdrawal do not count toward a student's number of unrestricted drops. Students must discuss with an academic advisor how the withdrawal will affect their academic standing and discuss with a financial aid advisor how it will affect their financial aid. Students receiving VA benefits should talk to the Veterans Services office. Students wanting to withdraw from all courses after the withdrawal deadline may submit a college petition before the last day of classes.

Any undergraduate who withdraws from the university a second time will be automatically placed on college probation. Any student on college probation who withdraws from the university a third time may be, at the discretion of the college, ineligible for further registration in the college.

Degree Requirements

The Herbert Wertheim College of Engineering confers a Bachelor of Science degree upon all students who have successfully completed a program of study and have fulfilled all requirements for a specific major in the college.

A thesis is not required for the baccalaureate degree. However, the department can grant permission to exceptional students to undertake a thesis in lieu of up to four semester credits of required or elective work in the student's department.

Required Minimum Grade Point Averages

- 2.5 - 2.8 GPA is required in critical-tracking courses depending on major
- 2.0 GPA is required for all courses in the college
- 2.0 GPA is required in all courses in the department

- 2.0 GPA is required in all courses taken after being classified as an upper division student
- 2.0 cumulative GPA is required in all work attempted at the university

All grade point averages are based on a 4.0 scale. Critical tracking grade point averages are computed on the best of the maximum two attempts (including withdrawals) allowed for each course.

Technical Foundation Courses

Technical coursework is required of all students. This coursework also satisfies the Mathematics and Physical and Biological Science categories of the General Education requirement. Generally, all technical coursework must be completed or be in final progress before a student can register for junior or senior-level engineering courses. Minimum grades of C are required in all critical-tracking coursework based on a maximum of two attempts, including withdrawals.

Some departments may have higher requirements.

Critical-Tracking Criteria

The Herbert Wertheim College of Engineering has established tracking criteria for all programs. Applicants with specific questions can contact the department or Engineering Undergraduate Student Affairs.

Students must fulfill the performance criteria for their program's tracking courses. Students who are off-track will be placed on probation. Students who fail to meet the conditions of their probation may not be allowed to continue in the Herbert Wertheim College of Engineering.

A minimum grade of C (based on a maximum of two attempts, including withdrawals) is required for each tracking course. Students may repeat a maximum of three critical tracking courses. Students must meet the minimum critical tracking GPA for their specific major to continue to the upper-division engineering program. Some departments require a grade higher than C in critical tracking courses. Students are expected to complete all critical tracking courses by the fifth tracking semester.

To be on track, students must meet or exceed these minimum performance criteria.

Tracking Courses

Semesters at UF	Minimum Completed	Minimum GPA	Minimum Overall UF GPA
First	1	2.5	2.0
Second	2	2.5	2.0
Third	4	2.5	2.0
Fourth	6	2.5	2.0
Fifth	8	2.5	2.0

Required Tracking Courses | All Engineering Majors

Courses	Credits
Mathematics	15 credits
Calculus	
MAC 2311[1]	4
MAC 2312	4
MAC 2313	4
Differential Equations	
MAP 2302[5]	3
Physical/Biological Sciences	16 credits
Physics	
PHY 2048	3
PHY 2048L	1
PHY 2049	3
PHY 2049L	1
Chemistry	
CHM 2045 or CHM 2095[1,2]	3
CHM 2045L	1
CHM 2046 or CHM 2096[3]	3
CHM 2046L	1

Additional critical tracking requirements[4]
Refer to specific major plan

1 Calculus and chemistry placement will be determined by student scores on the online ALEKS assessment test, which is required for all engineering students.

2 Industrial and systems engineering majors: CHM 2045 is not required for tracking; however, it is required for graduation. CHM2045 is not required for Computer Science or Computer Engineering.

3 Aerospace engineering, civil engineering, computer engineering, computer science, digital arts and sciences, electrical engineering, industrial and systems engineering, mechanical engineering, and nuclear engineering either do not require CHM 2046/CHM 2096 or may substitute another course.

4 Additional critical tracking requirements for specific majors are listed in the major degree programs.

5 Not a critical tracking course for Computer Science or Industrial and Systems Engineering.

Progression to Graduation

The programs leading to bachelor's degrees in engineering are carefully planned and organized sequences. The highly motivated student with proper high school preparation can complete these programs in four years, including at least one summer term, by scheduling an average of 15 credits each semester.

Usually, foundation subjects common to all fields of engineering are studied in the first two years at the university or in a pre-engineering program at a state or community college. Specialized study is taken in the junior and senior years within a department of the college, where the program is tailored to the student's preparation, interests, and career goals.

The specific requirements for each major are outlined. Students must consult their academic advisors each semester before they can register for classes.

Graduating with Honors (https://catalog.ufl.edu/UGRD/academic-advising/academic-honors/#graduatingwithhonorstext)

Programs

MAJORS

- Aerospace Engineering
- Biological Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Combination Degrees
- Computer Engineering
- Computer Science | Herbert Wertheim College of Engineering
- Digital Arts and Sciences | Bachelor of Science
- Electrical Engineering
- Engineering | Exploring Engineering Studies
- Environmental Engineering
- Industrial and Systems Engineering
- Industrialized Construction Engineering
- Materials Science and Engineering
- Mechanical Engineering
- Nuclear Engineering

MINORS

- Biomechanics Minor
- Biomolecular Engineering Minor
- Computer and Information Science and Engineering Minor
- Computer and Information Science and Engineering Minor UF Online
- Electrical Engineering Minor
- Engineering Innovation Minor
- Materials Science and Engineering Minor

- Nuclear and Radiological Engineering Minor
- Sales Engineering Minor

CERTIFICATES

- Artificial Intelligence Fundamentals and Applications Certificate
- Engineering Innovation Certificate
- Engineering Leadership Certificate
- Engineering Project Management Certificate
- Packaging Engineering Certificate
- Sustainable and Resilient Energy Engineering Certificate

Computer-Related Degrees

The Herbert Wertheim College of Engineering has responsibility for teaching all computer courses included in computer-related degree programs at the University of Florida. These degrees are offered in the colleges of Business, Engineering, and Liberal Arts and Sciences.

Computer Engineering

Computer Engineering (CPE) is a joint program of the Computer and Information Science and Engineering (CISE) and the Electrical and Computer Engineering (ECE) departments. The Bachelor of Science in Computer Engineering (BSCPE) is offered by both departments and requires 126 credits for graduation.

This degree program produces a computer engineer who has the knowledge of hardware and software to build working computer systems from electronic components and to program them for a variety of tasks.

Combination Degree Programs

Qualified students can pursue a bachelor's and a master's degree concurrently. These combination-degree programs are offered in all departments within the Herbert Wertheim College of Engineering.
More Info (https://catalog.ufl.edu/UGRD/academic-advising/combined-degrees/)