

**COLLEGE OF ENGINEERING
and
APPLIED SCIENCE**

**PARENT/STUDENT HANDBOOK
2021**

**Welcome from Dr. David Mukai
Associate Dean for Undergraduate Education**



Welcome to UW and thank you for entrusting your student to us, particularly during these uncertain times of COVID-19 and University Reorganizations and budget cuts. Two things I want you to know is that safety is our top priority and that we are committed to providing the best possible educational experience for your student. I understand that the uncertainty of being in an evolving process has added to the changes that come with embarking on a new collegiate career is challenging. Let me assure you that we are committed to the growth and success of every student in our program and I am proud to say that the College of Engineering and Applied Science is dedicated to excellence in undergraduate education. Consider this student handbook as the first of many deposits we will make over the years to come in your student's education. This handbook addresses some of the concerns we anticipate you might have about policies and student life. It also provides direction on where to find answers for other questions that may come up.

The tradition of excellence in undergraduate education in the College of Engineering and Applied Science is fostered by our talented and dedicated staff and faculty. Our resources and technology are cutting-edge, and we try to ensure that your student has every tool and opportunity needed to succeed in a demanding technical profession.

Please feel free to contact any of the frontline personnel in the College if you have a question or concern. Stay in touch with your student, but please try to give them the freedom needed to grow as young adults. They are in good hands.

David J. Mukai, Ph.D.
Associate Dean for Undergraduate Education



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ENGINEERING AT THE UNIVERSITY OF WYOMING

A well-balanced offering of technical knowledge and cultural context courses make up the degree programs in the College of Engineering and Applied Science. The undergraduate programs of study listed below are accredited by the national Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET/EAC). The accreditation of undergraduate programs is important because graduating from an accredited program is one step in becoming a registered professional engineer. The Computer Science programs is accredited by the Computing Accreditation Commission (ABET/CAC). More information about ABET can be found at www.abet.org.

BACHELOR OF SCIENCE

Architectural Engineering
Chemical Engineering

Civil Engineering

Computer Engineering

Computer Science

Construction Management

Electrical Engineering

Energy Systems Engineering

Mechanical Engineering
Petroleum Engineering

MASTER OF SCIENCE

Atmospheric Science

Chemical Engineering

Civil Engineering

Civil Engineering/Water Resources

Computer Science

Electrical Engineering

Environmental Engineering

Mechanical Engineering

Petroleum Engineering

DOCTOR OF PHILOSOPHY

Atmospheric Science

Chemical Engineering

Civil Engineering

Computer Science

Electrical Engineering

Mechanical Engineering

Petroleum Engineering

FUNDAMENTALS OF ENGINEERING EXAM (FE)

The Fundamentals of Engineering Exam, more commonly known as the FE exam, is an online exam, required of all engineering seniors at the University of Wyoming. The exam consists of discipline-specific exams for Civil, Chemical, Electrical & Computer, and Mechanical engineering. Other UW engineering majors complete the exam that is entitled Other Disciplines. Review sessions are conducted by faculty members. **Engineering students must complete the exam, with a good faith effort to pass, no earlier than 9 months before graduation and no later than their expected graduation date.** Passing the FE exam enables a graduating student to be an "Engineering Intern." After successful completion of the FE exam, a minimum of four years of engineering practice under a licensed professional engineer, and successful completion of the appropriate professional licensing exam, graduates will become a Licensed Professional Engineer (PE).

FINANCIAL ASSISTANCE

University financial assistance awards are made solely on the basis of the student's or family's financial position. These awards consist of low-interest loans, grants, or part-time employment. Special application forms are necessary in order to be considered for this type of aid. Details and applications can be picked up at the Financial Aid Office in Knight Hall.

Scholarships

The College of Engineering and Applied Science offers merit-based scholarships to its students. The College offers its scholarships for one academic year at a time. All continuing students, as well as incoming freshmen and transfer students, are considered for College scholarships for the following academic year. For those incoming freshmen and transfer students who missed the initial consideration, there is the possibility of a scholarship being awarded in July. Students in this situation should contact Laurie Bonini at lbonini@uwyo.edu

The College of Engineering and Applied Science does not require students to apply for scholarships awarded through our endowments. **All students are automatically considered for support.** Grants and loans that depend on financial need require that the FAFSA be completed. You can learn more about UW's scholarship program at: <http://www.uwyo.edu/scholarships/>.

CALCULATORS

The College does not require a specific brand or model of calculator. However, engineering and math students tend to use Texas Instrument (TI) calculators. A number of different models are sold in the UW Bookstore or any number of stores in town. A technical-type calculator with engineering functions such as trig functions (sin, cos, tan), logarithmic functions (ln, log, exp, etc.) and vector operations (dot product, cross product, etc.) is a necessity. Graphing capability is also very useful. Programmable calculators are not necessary, but this capability may be of interest.

COMPUTERS

The Engineering Science Interactive Graphics (ESIG) computer laboratories are available to all students in the College. The labs include workstations, Windows-based PCs, laser printers, plotters, and other equipment. A user-ID and password are necessary to use the facilities. Lab hours vary, but generally the labs are open 7 days a week during the semester.

Each academic department maintains at least one computing facility for its majors. These labs usually support software packages that are not available on the ESIG computers.

While the College of Engineering and Applied Science does not require that a student have his or her own computer, it is becoming more common for students to bring a computer to the University. Certain software that is used in classes is available at no cost or can be purchased in the UW bookstore. It is strongly suggested that some sort of system (cable and lock) be used to secure the computer to the built-in desk in the residence hall rooms or some heavy desk that cannot be easily moved. The College has a purchase recommendation for those who would like to bring their own computer to campus. Please go to

<http://www.uwyo.edu/ceas/resources/student-services/computer-resources.html>

GRADUATION REQUIREMENTS

Curricular Requirements

Each major in the College has a specified curriculum that must be followed for graduation. Curriculum sheets for each major are available from your academic advisor or the CEAS Advising Center Curriculum page (<http://www.uwyo.edu/ceas/academics/advising/curriculum.html>). All substitutions and transfer equivalencies originate with your academic advisor and must be approved by the academic advisor, the department, and the Associate Dean for Academics.

University Studies

The University Studies Program 2015 (USP 2015) is UW's general education requirement and must be completed in order to graduate. The USP is not a separate degree program, but is already integrated into each of the College's curricula and is completed through a combination of required and elective courses.

Minimum Grade Point Averages

In order to receive a degree from the College, minimum GPA requirements must be met. Students must have a minimum 2.0 cumulative GPA on all courses completed at UW. Students must also have at a minimum 2.0 cumulative GPA on all engineering courses completed at UW. Transfer work and AP credit do not enter into the computation of a UW grade point average. In addition:

- A grade of C or better must be earned in all courses that are prerequisite to any required engineering science course.
- Computer science majors must earn a C or better in all required COSC, MATH, STAT, and Application Area courses.
- Civil and Architectural Engineering students must fulfill the Gateway Requirement prior to enrolling in any upper-division CEAS courses (see <http://www.uwyo.edu/civil/undergrad/>).
- Mechanical Engineering and Energy Systems Engineering students must successfully complete the Mechanical Engineering Success Curriculum prior to enrolling in any upper-division ME or ESE courses (see http://www.uwyo.edu/registrar/university_catalog/5enme.html).

Minimum Upper Division Hours

At least 42 upper division (junior or senior level) hours, of which at least 30 must be earned at the University of Wyoming, are necessary in order to receive a UW degree. Several degree programs in the College require additional upper division hours. Second bachelor's degree students must complete 30 hours at UW, 12 of which must be upper division.

Prerequisite Policy

The College of Engineering and Applied Science strictly enforces successful completion of prerequisite courses prior to registration in advanced courses. Students must adhere to the appropriate course sequence for their majors. The College of Engineering and Applied Science reserves the right to administratively drop any student from a course at any point in the semester if the student is found to have not completed the appropriate prerequisite course(s).

The Degree Check Process

In order to verify that all necessary courses have been completed, students must complete a check sheet with their advisors. The process should be initiated approximately two semesters before completion of the degree.

The check sheet is used to verify that the electronic posting of coursework is accurate. Failure to complete the check sheet in a timely manner may result in difficulties - including a delay in graduating. Degree check sheets for each major are available from your academic advisor.

TUTORING

Tau Beta Pi (the national engineering honor society) offers free tutoring for basic math, science, and engineering courses including Calculus I, II, III, Differential Equations I, Statics, Dynamics, Fluids, Circuits, Mechanics of Materials, Thermodynamics, Chemistry, and Physics. Information regarding these help sessions is readily available to students through the Dean's Office, postings throughout Engineering Hall, and on the College website.

The Computer Science Department offers tutoring in EN 4072. Check with the Computer Science Office (EN 4083, cosc@cs.uwyo.edu) for hours.

Individual departments in other disciplines, including Math, Physics, Chemistry, and English, also offer free tutoring for specific courses. Details are available through the specific departments.

Other tutoring opportunities on the UW Campus include:

- STEP Tutoring Center (<https://www.uwyo.edu/step/>)
- Washakie (lower level) Tutoring Center (<https://www.uwyo.edu/step/> - View STEP schedule)
- Writing Center (<http://www.uwyo.edu/ctl/writing-center/>)
- Math Assistance Center (<http://www.uwyo.edu/mathstats/casm/>)
- Oral Communication Center (<http://www.uwyo.edu/cojo/occ/>)
- E-Tutoring (<https://www.uwyo.edu/step/tutoring/online/index.html>)

EMPLOYMENT OPPORTUNITIES

The Center for Student Success (CSS) in the College of Engineering and Applied Science provides a full range of career services (www.uwyo.edu/ceas/resources/student-services/jobs/). To ensure that our students are well positioned in today's job market, the CSS works to inform, engage, and encourage students to be self-directed in their career planning and development.

By working closely with the Advising, Career & Exploratory Studies (ACES) Center, the University's centralized career service center, we are able to provide our students with a wide variety of employment opportunities and services. Through direct contact with employers, we make internships, co-ops, and permanent employment opportunities regularly available to our students. The CSS, in conjunction with ACES, provides additional services including career counseling, resume and cover letter help, career events, campus interviews, access to job market, salary information, and more. We continuously strive to recruit and strengthen the College's connection with our corporate partners.

ORDER OF THE ENGINEER

Ethical behavior is an integral part of the engineering profession, and College of Engineering and Applied Science students are expected to maintain the highest standards of honesty and integrity. Students should be aware of UW's policy regarding academic dishonesty, which is discussed in the University Catalog.

The opportunity to join the Order of the Engineer will be extended to students in the traditional engineering disciplines when they graduate from the College. The organization, which began in the United States in 1970, is a fellowship of engineers who are dedicated to the practice, teaching or administration of their profession. The oath includes the pledge to practice integrity and fair dealing, to uphold the standards of an engineer, and to participate in none but honest enterprises. The Order of the Engineer ceremony includes the traditional ring, which is worn on the little finger of the working hand. The ceremony takes place twice each year in conjunction with graduation. To join the Order, it is necessary to attend the induction ceremony. The ceremony includes an opportunity for our colleagues in the applied sciences (computer science and atmospheric science) to accept the obligation of their profession.

FERPA: Family Educational Rights and Privacy Act of 1974

What is FERPA? The Family Educational Rights and Privacy Act of 1974, as amended (also known as the Buckley Amendment), affords students certain rights with respect to their education records. Specifically, it affords students the right to:

1. inspect and review their education records;
2. request the amendment of inaccurate or misleading records;
3. consent to disclosure of personally identifiable information contained in their education record; and
4. file a complaint with the U.S. Department of Education concerning alleged failures of the institution to comply with this law.

The University of Wyoming strives to fully comply with this law by protecting the privacy of student records and judiciously evaluating requests for release of information from these records. FERPA authorizes the release of "Directory Information" without the student's prior written consent under certain conditions set forth in the Act. Parents, spouses and other relations do not have a right to information contained in a student's education record.

DATES TO REMEMBER

Due to COVID, changes to these dates could happen, so please watch your email for any updates to this schedule!

Cowboy Connect – August 19-August 22, 2021 -

New Students (freshmen, transfer, nontraditional, and veterans) receive a special welcome to the University of Wyoming. Check your UWYO email for more information!

First Day - Fall Semester Classes – August 23, 2021

Labor Day – September 6, 2021

Tuition and Fees Due - September 1, 2021

Mid-Semester – October 14, 2021

Homecoming – October 16-23, 2021

Registration Preparation Begins for Spring – October 25, 2021

Watch for an email from your advisor! <http://www.uwyo.edu/ceas/academics/advising/staff/>

Last Day to Withdraw from Individual Semester Courses – November 5, 2021

Thanksgiving Break – November 22-26, 2021

Last Day of Fall Semester Classes – December 10, 2021

Finals Week – December 13-17, 2021



DID YOU KNOW?

Consistently, 85-90% of UW's College of Engineering and Applied Science seniors pass the Fundamentals of Engineering Exam on their first try. This compares to only about 65-70% nationwide.

During the Spring 2016 semester, 17.87% of the undergraduate students in the College of Engineering and Applied Science (CEAS) were female.

The average ACT composite score for entering freshmen in CEAS is 25.9.

Continuing UW CEAS students and incoming freshmen in CEAS are offered over 300 scholarships each year. Most college scholarships are given to reward academic excellence.

Corporations, alumni, and friends of the College of Engineering and Applied Science fund most of the engineering scholarships.

The alumni of the College of Engineering and Applied Science each year give over \$150,000 to the College Annual Fund, in addition to funding scholarships and many other special projects.

W. Edwards Deming, the father of modern Total Quality Management (TQM), was a 1921 UW graduate in Electrical Engineering.

Tom Osborne, an Electrical Engineering graduate from 1957, developed the first hand-held calculator that later became the HP35.

The first engineering building was completed on campus in 1893.

Members of the faculty have written engineering textbooks that are used all over the world.

General Samuel C. Phillips, who earned a UW engineering degree in 1942, served NASA as the Apollo Manned Lunar Landing Program Director.

H. David Reed, a 1964 graduate in Mechanical Engineering, was a member of the mission control team that safely returned the crew of the damaged Apollo 13 to Earth.

Mike Sullivan, former U.S. Ambassador to Ireland and Governor of the State of Wyoming from 1986-1994, is a 1961 UW graduate in Petroleum Engineering.

Wyoming was the first state to require engineers to be registered, and Charles Bellamy became the first registered professional engineer in August of 1907. Three of his descendants are in the College's Hall of Fame.

Nationwide there are only 17 accredited nationwide programs in Architectural Engineering.

With very rare exceptions, the College of Engineering and Applied Science courses are taught entirely by regular faculty or practicing professionals, with graduate students assisting in the labs.