

College of Engineering

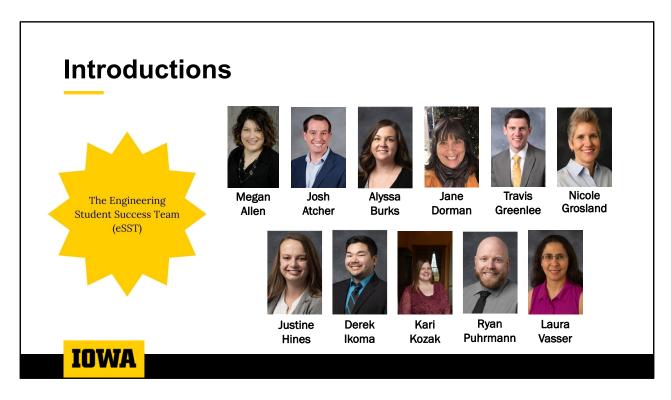
Supporting Your Engineering Student from Orientation to Graduation

Summer 2023

Welcome!

Today's webinar is being recorded and will be posted on the Orientation webpage along with a PDF version of our slides.

We received the questions you submitted at Registration. We will incorporate answers to those questions throughout, but as additional questions arise or if we have not addressed your question, please use the Q&A to submit questions to the panelists. Our team will be monitoring it throughout the presentation and provide answers live or in written format. We will also have time reserved at the end of today's webinar to answer your questions.



eSST Profiles: https://engineering.uiowa.edu/engineering-student-success-team

Megan Allen – Registrar

Josh Atcher – Director of Academic Advising and Student Support

Alyssa Burks – Assistant Director of Leadership Development / CEE First-year Advisor

Jane Dorman – Director of Admissions and Student Life

Travis Greenlee – Director of Career Services

Nicole Grosland - Associate Dean for Academic Programs, leader of the eSST

Justine Hines – Assistant Director of Academic Support / BME First-year Advisor

Derek Ikoma – Assistant Registrar / ME and ISE First-year Advisor

Kari Kozak – Director, Lichtenberger Engineering Library

Ryan Puhrmann – Assistant Director of Recruitment and Outreach

Laura Vasser – eSST Administrator

Alex Sigman, Orientation Leader
Jatin Dhamrait, Lead Tutor for Engineering Tutoring

The Plan for the Hour

- → Overview of the College and Curriculum
- → The Collegiate Advising Experience
- → Resources and Support
- → Leadership and Engagement Opportunities
- → Engineering Career Services
- → Community of Support
- →Q&A



College of Engineering

Engineering Majors

Students are **directly admitted** into whichever engineering major they want, they can start Undeclared, and they can change majors at any time.

→Biomedical → Chemical

→ Civil → Computer Science and Engineering

→Electrical →Environmental

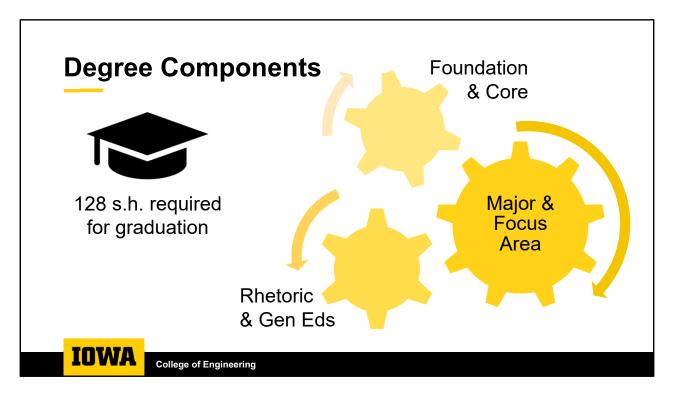
→Industrial → Mechanical

IOWA

College of Engineering

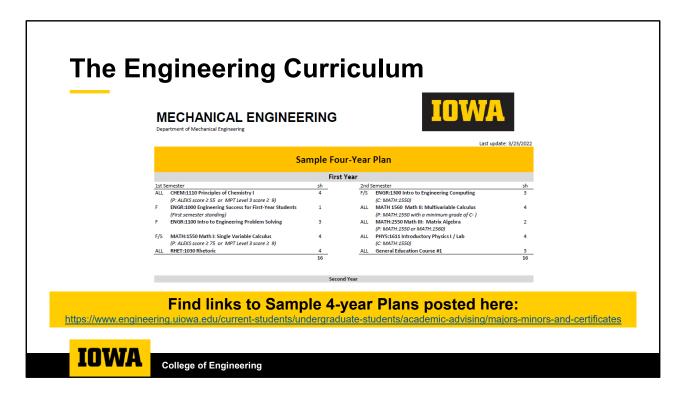
Engineering Majors: https://admissions.uiowa.edu/academics/engineering

- Biomedical engineering links biology, medicine, and engineering to improve human health. Many engineering students choose this major as preparation for medical school.
- Chemical engineering involves the industrial application of chemicals to new inventions or to improve the
 world. Chemical engineers use microbes to produce pharmaceuticals and chemicals, develop new sources of
 energy, create artificial organs, and design the next generation of polymers.
- Civil engineers create safe, smart, and sustainable infrastructure while protecting the natural environment. Students gain a broad background in areas of environmental, structural, transportation, and water resources engineering while they work on multifaceted real-world projects.
- Environmental engineers design systems that support the well-being of people and the planet. They improve countless lives by providing a clean and safe water supply; treating pollution in air, water, and soil; and developing sustainable solutions for future generations.
- CSE program combines a computer science degree and a computer engineering degree in one four-year program. The program provides students training and understanding of computer software and hardware along with the engineering analysis, design, and multidisciplinary teamwork skills needed to develop large and complex systems containing both software and hardware components.
- The electrical engineering program provides students training and understanding of hardware and software, ranging from device physics to medical imaging, electronics, embedded systems, communication, and control-systems engineering. Students may opt to specialize in one of 24 focus areas.
- Industrial and systems engineers use advanced mathematics and statistics, psychology, and systems theory to make processes, machines, healthcare, and organizations operate more efficiently. They are frequently key players in planning and implementing large-scale changes.
- Mechanical engineers use energy principles and mechanics to design a wide variety of devices, machines, and systems, including complex human-machine systems, for energy conversion, biofuel production, environmental control, materials processing, transportation, materials handling, and other purposes. They may develop robots for space exploration, use a computer to simulate the freezing of human cells, or improve devices for use of alternative energy sources.



128sh for each major - Average of 16sh each semester to complete the degree in 4 years.

- Foundation and Core At least 4 Math courses (starting with calculus), at least 1 Chemistry course, and at least 1 Physics courses, Problem Solving and Computing
- Major and Focus Area Common set of courses for the major and an opportunity to specialize within that major with the focus area.
- Rhetoric and Gen Eds Only 15sh of gen eds and 1 Rhetoric course Much different from other majors on campus where almost a third of the degree is gen eds.



The Sample 4-year plans outline a suggested course sequence to complete the requirements in 4 years. This is a very important planning tool for students, especially if they are ahead or behind in the curriculum.

The Engineering Curriculum: https://www.engineering.uiowa.edu/current-students/undergraduate-students/academic-advising/majors-minors-and-certificates

The Collegiate Advising Experience

Students are required to meet with an advisor every semester for registration authorization.

→ eSST Professional Advisors – Advise students on course selection at Orientation and during their first semester. Remain as an "additional advisor" to continue to support students through navigating policies/procedures, opportunities, and resources











Josh Atcher

Alyssa Burks

Justine Hines

Derek Ikoma

Ryan Puhrmann

- → Faculty Advisors Advise declared students from second semester through graduation.
 - Chemical Engineering students and transfer students are assigned a faculty advisor during their first semester in the College.



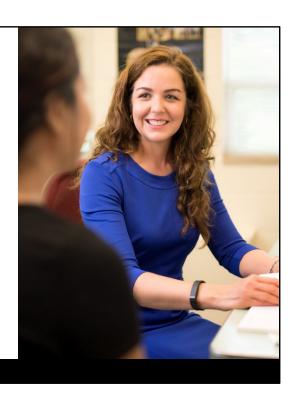
College of Engineering

eSST Advisors meet with students in individual appointments for registration in their first semester. eSST advisors offer regular drop-in hours throughout the semester to assist students with time-sensitive questions or concerns as they navigate the semester.

Faculty advisors provide advising through individual appointments and drop-in group advising opportunities each semester. Faculty use the appointment scheduling tool in a variety of ways – If students are not able to find a time to meet with their advisor through the scheduling tool, they should reach out by email to schedule a time.

Advising Expectations

- →What students can expect of their advisor – We will:
 - Provide encouragement and support
 - Share opportunities and refer students to resources
 - Help students navigate the curriculum, requirements and policies
 - Prepare students for course registration every semester



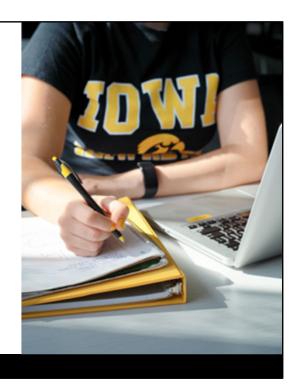


College of Engineering

Advisors are often viewed as only offering support for selecting classes, but we also serve as part of your student's support network. We assist students in navigating resources, deadlines, policies/procedures, and opportunities on campus. We support students navigating barriers to their success from adjusting to college life/academics (time management, study skills, etc.) to connecting students to resources for mental health and crisis response (death in the family, extended sickness/hospitalization, etc.).

Advising Expectations

- → Advisor's expect students to:
 - Be prepared for appointments
 - Be an active learner and ask questions
 - Check Ulowa email regularly
 - Let us know when they are encountering obstacles





College of Engineering

We provide students education on all the tools used for academic planning beginning at Orientation and through presentations in Engineering Success for First Year Students.

Different from high school counselors - we don't know how things are going. We don't have regular access to grades or personal information, so we rely on what students share with us.

Advising at Orientation

- → Students Complete the MyUI Orientation Tile
 - Placement Tests Math and Chemistry These are crucial for accurate course placement
 - Report Transfer/Dual Enrollment, AP, and IB coursework
 - College of Engineering Academic Advising Information
 - Once students complete the Orientation Tile, they will sign-up for their Orientation Registration and Advising appointment

College of Engineering Orientation Advising Information:

https://engineering.uiowa.edu/current-students/academic-advising/summer-orientation-advising-information



College of Engineering

Our expectations of students have already started as they begin to prepare for Orientation. Students who are signed-up for Orientation already have access to the MyUI Orientation Tile. The placement tests and credit reporting are crucial to the prep we do before meeting with students and the courses we ultimately recommend for their first semester.

Two Math Placement Tests

- ALEKS: https://newstudents.uiowa.edu/aleks students who have completed pre-calculus.
- AMPT: https://newstudents.uiowa.edu/mpt3 students who have completed a year or more of Calculus.

Chemistry Placement Test: https://newstudents.uiowa.edu/chemistry - all students unless transferring in credit for CHEM:1110 Principles of Chemistry I.

Students should plan for 90 minutes for each test. All tests have at least 1 retake available, but it is really important that students approach these with the same seriousness they would the ACT/SAT (minus the hours of study and prep). The scores are binding for math course placement.

When scheduling their appointments, students should choose a time that works for them during their ORA week. They should have access to a private space where they can concentrate and should plan to use a desktop/laptop/tablet with screensharing capabilities (not working or driving in a car).

If parents/family are interested in the advising information students review in the MyUI Orientation Tile, it can be viewed on our website.

College of Engineering Orientation Advising Information: https://engineering.uiowa.edu/current-students/academic-advising/summer-orientation-advising-information

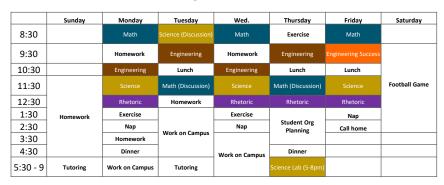
Orientation Registration and Advising Information: https://newstudents.uiowa.edu/academic-advising

Highlights what students can expect from their Orientation Advising experience.

Advising at Orientation

- →Advisors Prepare Individualized Recommendations Document (IRD)
 - Shared on MyUI 3-5 days before their scheduled advising appointment
- → Students meet with their advisor and register for Fall 2023 courses

Student Sample Schedule **In Real Life**





College of Engineering

Advisors use placement test scores and reported credit to prepare the Individualized Recommendations Document. Advisors will make recommendations for the most appropriate course for fall 2023 based on provided information. The IRD provides students directions on what they should do prior to our meeting – i.e.. Add courses to Schedule Builder and download and become familiar with Zoom.

In our MyUI Orientation Tile information as well as during our appointments, we discuss how scheduling looks different than HS. We note that they might have a late-night class or lab and have bigger gaps throughout their day. They may think primarily about the colored sections of the schedule above and not plan for/think about all the additional pieces.

Research shows students who are successful in college: For each 1 s.h. in class, a student should expect at least 2-3 hours of time spent outside of class. 40-50 hours work week. This includes using a variety of resources for support.

College of Engineering Resources and Support

- → Faculty Members
- → Engineering Tutoring
- → Fellow students (TAs, <u>Peer</u> <u>Advisors</u>)
- → Hanson Center for Communication
- → <u>Lichtenberger Engineering Library</u>
- → Student Success Workshop Series





College of Engineering

In the College of Engineering, we have MANY excellent resources that students can use to support their academic success. Lots of our incoming students have achieved high-levels of academic success in their high school career. However, the content and rigor of academics at the college level are much different. Your student will be challenged in their course work, perhaps for the first time. The good news is that students can access all these great resources at no cost to them. GREAT engineers use all the tools at their disposal to work through problems and find solutions. We encourage your students to utilize these resources early and often.

- **FACULTY:** Our engineering faculty members are both intelligent and empathetic people. Faculty members generally choose to go into academia because they want to see the next generation of students succeed. Each faculty member teaching a course will offer office hours where students can go to ask questions and receive advice. Students are also encouraged to reach out to faculty via email to ask questions or inquire about a meeting. Please know that many of our faculty members are also engaged in academic research or other professional endeavors. So, a student should give them reasonable time (48 business hours) to respond to emails.
- **ENGINEERING TUTORING:** https://engineering.uiowa.edu/current-students/academic-support-and-tutoring/engineering-tutoring

Engineering Tutoring provides FREE group tutoring to students taking foundational and core courses in the Engineering curriculum. Engineering Tutoring is staffed by undergraduate students who have been successful in their assigned courses. Engineering Tutoring is offered Sunday-Thursday 6:00-9:00pm in 3612 SC and 3630 SC. Students will just need to sign-in at our receptionist kiosk and then will be guided to a tutor who is available to help with their subject. Incoming students might utilize Engineering Tutoring for Engineering Math I-IV, Chem I/II, Physics I/II, and Introduction to Engineering Problem Solving among other courses.

• **FELLOW STUDENTS:** In addition to faculty, many classes will enlist the support of Teaching Assistants or TAs. TAs are students who have achieved success in the class or subject for which they are providing help. In addition, TAs will sometimes lead discussion sections, which offer supplemental help and opportunities to engage material outside of lecture. Similar to faculty, TAs will hold office hours when students in their course can come ask questions and receive assistance. The peer advisors are a group of students supervised by Travis Greenlee and will be highlighted in the following slides.

Peer Advisors: https://engineering.uiowa.edu/current-students/academic-support-and-tutoring/peer-advisors

• HANSON CENTER: https://engineering.uiowa.edu/current-students/academic-support-and-tutoring/hanson-center-communication

The Hanson Center for Communication (HCC) is an endowed program that works closely with engineering faculty to train students in verbal and written communication throughout the curriculum. The center helps review lab reports, topical papers, technical essays, and technical presentations each semester. The center helps create, manage, and grade writing and presentation assignments, as well as provide training to students, tutors, and faculty on best practices for communication.

LICHTENBERGER ENGINEERING LIBRARY: https://www.lib.uiowa.edu/eng/

Our Engineering Library is located within the Seamans Center. It is an excellent space for students to go to study or work on projects. In addition to being a wonderful library, it provides access to various tools or small pieces of technology that students can check-out from the front desk. Our librarian, Kari Kozak, also provides excellent programming for students that keeps them engaged in our College.

• STUDENT SUCCESS WORKSHOPS: https://engineering.uiowa.edu/student-success-workshops

Topics include:

- Time Management
- Resiliency
- Learning about learning/Metacognition
- Mindfulness
- Seeking Support
- SDS
- Financial Aid

These are resources that we share with students throughout the fall semester in advising emails, emails from Engineering Tutoring, and direct presentations in Engineering Success for First Year Students.

Student Leaders — What resources have you used? How were they helpful? What should parents/families do to help support their student in using these resources?

Additional Campus Resources and Support

→ Mental/Student Health Resources

- Mental Health at Iowa
- University Counseling
- Student Care and Assistance
- Student Health
- Student Wellness
- Student Disability Services
- → Tutor Iowa Tutor.uiowa.edu
 - Supplemental Instruction
 - Private Tutoring





College of Engineering

Mental Health at Iowa: https://mentalhealth.uiowa.edu/

- serves as a single hub to easily explore the mental health service options on the Ulowa campus
- Campus Mental Health Services, A Guidebook for Coping and Managing the Negative Impacts of COVID-19 (trauma, caring for self and others, sleep, etc.), Suicide Prevention Resources, and the Collegiate Recovery Program.

University Counseling: https://counseling.uiowa.edu/

- offers a variety of counseling services for currently enrolled University of Iowa students
- Types of Services include Individual Therapy, Group Therapy (men's and women's groups, ADHD, eating disorders), Trans-Inclusive services, Black Student Support groups

Student Care and Assistance: https://dos.uiowa.edu/assistance/

- provides assistance to University of Iowa students experiencing crisis and emergency situations
- crisis/emergency illness/hospitalization, death of family/friends, trauma

Student Health: https://mentalhealth.uiowa.edu/student-health

Student Wellness: https://mentalhealth.uiowa.edu/student-wellness

Student Disability Services: https://mentalhealth.uiowa.edu/student-disability-services

Tutor Iowa: https://tutor.uiowa.edu/

- Supplemental Instruction is a resource led by SI Leaders who attend lectures with the students and
 prepare content to actively engage students in that content in 50 minute sessions 3 times/week. SI is
 available for courses such as Engineering Math I/II, Principles of Chemistry I/II, Introductory Physics
 I/II, Statics, etc.
- Private Tutors are available through Tutor Iowa for a variety of courses. Students self-select to become private tutors and receive training before being promoted on the website. Private tutors set their own availability and rate for their tutoring services. It is not a guarantee that there are students available for every course, but it is a good place for students to first look.

Orientation Virtual Programs: https://newstudents.uiowa.edu/additional-virtual-programming

• Virtual Sessions for Housing and Dining, Financial Aid, University Honors, UI Wellness, University Counseling Services, Student Disability Services, Student Employment, and much more!

Leadership and Engagement Opportunities

- → <u>Leadership</u>, <u>Ethics</u>, <u>and Professional</u> <u>Pathways</u> (LEaPP)
- → Research with faculty members
- → Student Organizations
- → Studying Abroad
- → Mentoring Opportunities
- → Honors in Engineering





College of Engineering

- Statistics show that involvement often improves student success. A Cal State Sacramento study found that students who got involved on campus had higher rates of retention and graduation as well as higher GPAs.
- Get involved early to help connect to campus and others as soon as possible
- Mentorship opportunities are also available in multiple Engineering Student Organizations

Leadership, Ethics, and Professional Pathways (LEaPP): https://engineering.uiowa.edu/research/student-research-opportunities

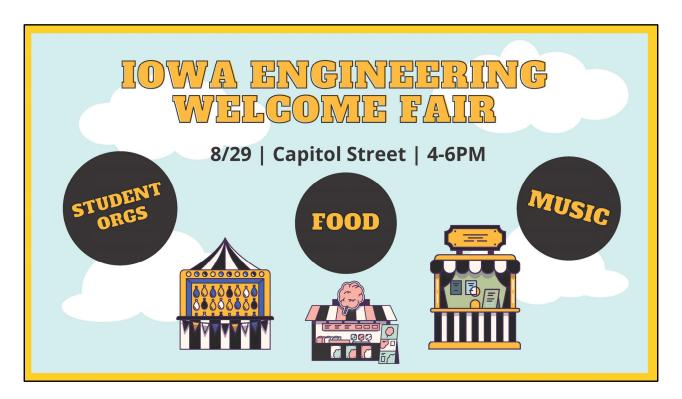
Research with Faculty Members: https://engineering.uiowa.edu/research/student-research-opportunities

Student Organizations: https://engineering.uiowa.edu/current-students/something-more-opportunities/student-organizations

Studying Abroad: https://engineering.uiowa.edu/current-students/something-more-opportunities/global-engineering

Mentoring Opportunities: https://engineering.uiowa.edu/alumni-and-friends/alumni-volunteer-opportunities/engineering-connection

Honors in Engineering: https://engineering.uiowa.edu/current-students/something-more-opportunities/honors-program/engineering-honors-program



- This event is the perfect way to start to get involved right away
- Stop by tables and sign up for email lists and learn about other programs in the College!
- Employers are also involved in this fair and it can be a great opportunity to learn about internships.

Engineering Career Services (3612 Seamans Center)



Engineering Peer Advising

- Assist with picking classes, choosing a focus area, etc.
- Conduct resumes review and mock interviews



Employer Engagement

- Employer of the Week
- In-person & Virtual Engineering Career Fairs
- BME Discovery Day



Workshops & Programs

- Sessions on career exploration and preparation
- · Classroom Presentations
- Career Fair Prep Week



College of Engineering

Engineering Career Services: https://engineering.uiowa.edu/current-students/engineering-career-services

Engineering Peer Advising

- Senior Engineering students that represent all 6 departments
- The main difference between the ENGR Peers and the PCC Peers is that the ENGR Peers can also help with academic questions
 - How to drop a class, mapping out their graduation plan, choosing a major, etc.

Employer Engagement

- Employer of the Week is a segment where a different employer will be highlighted nearly every week of the semester. That will include tabling and classroom discussions.
- BME Discovery Day- is a one-day virtual conference where BME students, faculty, staff, and alumni can come together to foster career exploration and occupational guidance, learn about industry trends, and build relationships through networking. (https://bme.engineering.uiowa.edu/bme-discovery-

day#:~:text=BME%20Discovery%20day%20is%20a,and%20build%20relationships%20through%20net working.)

Workshops & Programs

- Career Fair Prep week is the week prior to the fair where we do a deeper dive on the steps needed to be career fair ready. It helps knock down some of the concerns and barriers students face as they approach engaging with employers during their first Career Fair.

Post Graduation Data: https://careers.uiowa.edu/post-grad-data

A Community of Support

- → Partner in supporting students, but different than high school.
 - FERPA Family Educational Rights and Privacy Act
 - Academic Record Consent Form (MyUI Student Life Management)
- → Ways to offer support to your student
 - Suggest checking their UI email account regularly
 - Encourage problem solving when challenges arise
 - Recommend outreach to their advisor or other eSST staff



College of Engineering

FERPA Information: https://registrar.uiowa.edu/ferpa

We are always available and willing to answer general questions about the University, but will not be able to discuss specific information about your student's academic record or involvement on campus. Typically, we encourage family and guests to reach out to their student directly to discuss this information as college is an important time for students to develop skills related to independence and responsibility within their personal journey.

If your student is interested in allowing University staff to share information with you about their academic record, they may indicate so through the Academic Record Consent Form on MyUI. Additional information can be found on the FERPA webpage: https://registrar.uiowa.edu/ferpa

Ask your student if they check their University email regularly. The University email account is our primary mode of communicating with students, so it is important that students check this email regularly. Students will miss out on important information if they are not checking this account.

Ask your student what they have done to problem solve when they run into challenges. As early as during the orientation experience, your student may have questions or face a situation where they need more information. Encourage your student to think through their support system at the University (even though it is still in development). Who could they contact – Admissions? The Office of Student Financial Aid? Their advisor? This is a skill that we will help them build during their time with us – knowing their support team and giving thought to who might be able to help in a given situation. If you solve everything for them, they miss out on developing this important skill.

Encourage them to contact their advisor. We will do our best to communicate with your student to let them know when it is time to schedule an appointment, but it is up to them to follow through and make the appointment. We appreciate if you ask about their experience with their advisor to ensure that they are taking advantage of this help. Students get out of advising what they put into it and we want to help them as much as possible.



Come visit us at the Becoming a Hawkeye Information Fair if you are on campus this summer! ©

Becoming a Hawkeye Orientation Program: https://newstudents.uiowa.edu/student-orientation-overview/becoming-hawkeye-program

Preparing your student for Week 1

- → Computer Recommendations
- → Calculator Recommendations TI89
- → Purchasing Textbooks and Resources (MyUI Home Textbook Tile in Student Information section)
- → HART (Hawkeye Academic Readiness Transition) Chemistry and Math Prep Courses
- → Tips from our students?



College of Engineering

Laptop computer recommendations: https://engineering.uiowa.edu/laptop-recommendations-students

Many students use TI89 calculators. These are generally allowed for most exams. More advanced calculators may be restricted from use on college level exams.

Student Leaders - When did you usually purchase your textbooks and resources? What do you find helpful as you prepare for the first week? (Review syllabi, walk through schedule on campus, attend Onlowa!, etc.)

HART is an online summer course prep option available to students who enroll in MATH:1550 Engineering Math I or CHEM:1110 Principles of Chemistry I. HART is for students to focus on their understanding of chemistry and/or math. Students engage with online ALEKS modules to better grasp material, so they are more prepared for the fall semester. Data shows students who completed HART previously have earned higher grades compared to their peers who did not complete HART. The course runs July 5-August 11.

Student Leaders – Any additional tips?



eSST Email: Engineering-SDC@uiowa.edu

Q&A:

College of Engineering Scholarship Information:

https://engineering.uiowa.edu/academics/engineering-scholarships

• Opportunities available for current/continuing students



College of Engineering

Thank You! Go Hawks!

