

Course Information

Course Number:	ENGR 13300
Course Title:	Transforming Ideas to Innovation – EPICS
Credit Hours:	2.0
Modality:	Face-to-face
Prerequisites:	None

Sections

Sec #	CRN	Meeting Times	Classroom	Brightspace Page
LC1	11762	Tue & Thu at 7:30-9:20 AM	ARMS B061/B098	Fall 2022 ENGR 13300 – LC1 SD
LC2	11765	Tue & Thu at 9:30-11:20 AM	ARMS B061/B098	Fall 2022 ENGR 13300 – LC2 SD
LC3	11773	Tue & Thu at 11:30-1:20 PM	ARMS B061/B098	Fall 2022 ENGR 13300 – LC3 SD
LC4	26588	Tue & Thu at 9:30-11:20 AM	SHRV C111	Fall 2022 ENGR 13300 – LC4 SD
LC5	24506	Tue & Thu at 1:30-3:20 PM	SHRV C111	Fall 2022 ENGR 13300 – LC5 SD

Instructor Contact Information

Each section of ENGR 13300 is taught by a teaching team that includes an instructor, a graduate teaching assistant (GTA), undergraduate teaching assistants called Peer Teachers (PTs), and undergraduate graders. See below and in Brightspace for names and contact information for your section's instructor and GTA – click on **Welcome to ENGR 13300** in the left-hand navigation menu (under Content) and then select **Meet Your Instructional Team**. For answers to administrative questions, contact the FYE Operations Center at fye-opscenter@purdue.edu.

Sec #	Name	Email
LC1/LC2/LC3	Prof. William Oakes	oakes@purdue.edu
LC4	Prof. John Cole	jhcole@purdue.edu
LC5	Prof. Carla Zoltowski	cbz@purdue.edu

Office Hours

Professors, graduate teaching assistants (GTAs) and peer teachers provide ENGR 13300 help sessions (also called office hours) each week. Attendance at help sessions is an opportunity for you to receive guidance in determining answers to specific questions. See **Essential Course Details** on Brightspace for scheduled times and locations as well as general office hour guidelines. Additional help is also available from your instructor; contact your instructor to arrange a meeting via office hours.

Course Description

Introduces students to the engineering professions using multidisciplinary, societally relevant content. Students will develop engineering approaches to systems, generate and explore creative ideas, and use quantitative methods to support design decisions. Students will experience the process of design and analysis in engineering including how to work effectively in teams, and will develop skills in project management, engineering fundamentals, oral and graphical communication, logical thinking, and modern engineering tools (e.g., Excel and MATLAB). An emphasis will be placed on computing logic development and builds upon the co-requisite experience of the students in the EPICS class.

Course Schedule

For an updated course schedule with lecture topics, homework assignments, and quiz dates, please visit the **Essential Course Details** in Brightspace.

Course Prerequisites & Requirements

When you begin this class, you are expected to have knowledge of:

- Mathematics, including arithmetic, algebra, geometry, analytic geometry, and trigonometry.
- Microsoft Windows or Macintosh operating system.

If you have a weakness in any of these areas, you are responsible for reviewing before attempting to complete related assignments. You are also expected to be able to communicate in spoken and written English with your peers, teammates, and the faculty and support staff.

Please **contact your instructor** if you have any concerns about these requirements.

Learning Resources, Technology, & Texts

While there is no required textbook for ENGR 13300, video modules (Pre-Class Videos) are required and will be used as background resources. You will use the following instructional technologies in ENGR 13300:

- **Brightspace:** Within Brightspace, you will have access to course announcements, schedules, assignments, quizzes, exams, grades, feedback, and course resources. ([Link to Brightspace](#))
- **CATME:** You will use CATME to submit information used for Team Formation and Peer & Team Evaluations ([Link to CATME](#)).
- **Gradescope:** Many assignments are submitted via Gradescope. You will access this through your ENGR 133 Brightspace section during your course.
- **Messaging Tools:** Your section may use a messaging tool, such as Slack or Discord. See your section's Brightspace, class slides, or email regarding this.
- **MS Office:** Word, Excel, and PowerPoint. ENGR 133 requires Excel 2016 or newer. If you need an updated version, Office 365 is free to Purdue students. For more information, visit [Purdue Office 365](#)
- **Preferred browser:** Information Technology at Purdue (ITaP) recommends Google Chrome or Mozilla Firefox when accessing Brightspace. If you are using another browser or a mobile device, you may be unable to access some Brightspace content.
- **Purdue Email:** Communication regarding the course may come to your Purdue email. Check your Purdue email regularly and often.
- **Zoom:** Some meetings with an instructional team member may be handled via Zoom. Download the Purdue Zoom app on your laptop or PC. ([Link to Purdue Zoom](#))

Your instructor may use additional technologies and software to facilitate interaction.

Learning Outcomes

In ENGR 13300, you will learn to:

- practice making evidence-based engineering decisions.
- function effectively as a member of a diverse team.
- develop professional habits including professional communication, teamwork, and information literacy that will benefit you both as a student at Purdue and as a practicing engineer.
- develop skills to apply computational tools to solve engineering problems represent and interpret data in multiple formats.
- Identify potential engineering major choices and describe how they may fit into your academic plan of study and career interests

For the course learning objectives and topics, please visit the **Essential Course Details** on the Brightspace page.

Class Structure

ENGR 13300 follows the model of a flipped classroom:

- Before class, you will watch pre-class videos related to course topics. Activities that are traditionally called lectures are delivered in the form of online video modules.
- In class, you will work on activities in teams or pairs related to the day's topics. Assignments and activities that are traditionally considered as homework are started during class.

Once team assignments begin, you are expected to have regular team meetings and work collaboratively on team projects and assignments outside of class. (Teams will be formed by the second week. Until then, the teams will be randomly assigned). Your performance as a team member is part of your course grade. Failure to adequately engage professionally in team activities may result in individual loss of credit on work that was turned in as a team. Past ENGR 13300 students have found their teaming experience in this course to be worthwhile and rewarding.

Grading Scale

The teaching team will assign your semester grade according to the total points you earn. For a full breakdown, see the table below. To move on out of first-year, your final grade in ENGR 13300 must be a C- or better.

Grade	Grade Value
A	Greater than or equal to 92%
A-	Greater than or equal to 90% and less than 92%
B+	Greater than or equal to 87% and less than 90%
B	Greater than or equal to 82% and less than 87%
B-	Greater than or equal to 80% and less than 82%
C+	Greater than or equal to 77% and less than 80%
C	Greater than or equal to 72% and less than 77%
C-	Greater than or equal to 70% and less than 72%
D	Greater than or equal to 60% and less than 70%
F	Less than 60%

NOTE: The number of As, Bs, and Cs, etc. that will be issued is not predetermined.

Points are earned for each assignment (individual and team) as well as each assessment (pre-class and in-class). The teaching team will assess your performance via assignments (team and individual) and assessments (pre-class and in-class). Each assignment will be listed on Brightspace with detailed instructions on what work to do, how it will be evaluated, when it is due, and how to submit it. **The grade posted in Brightspace will accurately reflect your grade in the course.** Points are awarded for assignments and assessments in the following categories.

Grade Category	Points per	Total Points
Pre-Class Quizzes (23 total, drop 3)	3	60
TYK Quizzes (7 total, drop 1)	25	150
Concept Quizzes (5 total, drop 1)	60	240
Team Assignments (13 total, drop 1)	5	60
Individual Assignments (14 total, drop 2)	10	120
Team Project	-	125
Individual Project	-	110
EYM	-	80
Participation, Professionalism, and Attendance	-	55
	Total	1000

Assessments

- **Pre-Class Quizzes** review the material from the pre-class videos and reference materials. Each quiz is worth 3 points, regardless of number of questions. You may take these quizzes as many times as you wish to increase your score. There are 23 quizzes and we will drop 3 and take the top 20 scores.
- **Test Your Knowledge (TYK)** are shorter quizzes that are given in class based and designed to be completed in about 20 minutes. Each is worth 25 points regardless of the number of questions. They are drawn heavily from the pre-class quiz and in-class materials. There are five TYK's, and the top four are calculated in the grade so we will drop the one lowest score.
- **Concept Quizzes (CQ)** are larger quizzes that will be completed in class. These quizzes cover the major topics of the course and assess the course learning objectives. There are five quizzes each worth 60 points. Four are counted in the final grade with the lowest one being dropped from the calculation.

Late Work Policy

On-time submission of assignments, quizzes, and exams is vital to successful performance in this course. Unless a special case applies, late work is either not accepted or accepted with penalty as follows:

- **Submitting late individual work without penalty:** You may submit late individual assignments without penalty only when you have an approved grief absence or an exceptional situation such as a severe or prolonged illness, or a medical or family emergency. In these situations, provide supporting documentation and arrange submission of your late work with your graduate teaching assistant (GTA).
- **Submitting late individual or team work with a 25% penalty:** On individual assignments, you may submit work up to 24 hours late, but you will be penalized with a reduction of 25% of the points earned. For example, if you turn in an assignment 20 hours late and it earns a score of 8 points, then your score will be 6 points.
- **No individual work may be submitted after the 24-hour late period.**
- CATME surveys and Peer and Team evaluations may not be completed after the due date.

NOTE: Because you will often spend class time working with your team and many assignments are team assignments, notify your team members if you will be absent for any reason, planned or unplanned.

Concerns about Grading

The purpose of grading is to assess your understanding and utilization of the concepts taught in the course, and to **provide you with feedback about the strengths and weaknesses evident in your work**. Full credit may be awarded on items that are mostly correct even if the work still contains errors in understanding. Therefore, it is important that you not only check your score on a particular assignment or exam, but also **review the feedback provided by the graders** in Brightspace or Gradescope. This feedback will help you **improve your understanding** of the concepts being assessed and, in turn, improve your performance on future work.

If you have concerns about how an assignment was graded, submit a **Regrade Request** to your graduate teaching assistant (GTA) with a detailed description of the concern within **seven days** after the graded assignment was revealed in Brightspace. Your email **must** include your name, ENGR 133 section number, team number, the assignment name, and a clear, detailed description of your concern about the grading. Please see **Communication with the Teaching Team** (below) for proper email etiquette.

Professional Expectations

Each Professional Expectation (PE) in ENGR 13300 reinforces the idea that everyone in our learning environment helps shape the environment so that it is positive and productive for all.

Communicating with the Teaching Team

When communicating with members of your ENGR 13300 instructional team, your email must originate from *your Purdue email account* and include:

- your name
- ENGR 13300, section number, and team number (once teams are assigned)
- topic (e.g., assignment name)
- a detailed description of your concern

For professional communication, make sure your email is:

- appropriately addressed to the recipient (e.g., not “Hey,” but “Dear Professor”),
- includes a helpful subject line with ENGR 13300 included (e.g., “ENGR 133: Question about Assignment 1”),
- written in complete sentences,
- specific (e.g., not “I have a question on the assignment” but “I have a question on part 2 of problem 3”),
- concluded with an expression of appreciation for the reader’s time or help.

Attendance Policy

Maintaining contact with your instructor, class, and team is an important part of your success in the classroom. You are expected to attend classes and participate in the in-class activities. You and your team will both benefit from your participation.

You are responsible for:

- **Preparation:** be prepared for each class according to your instructor’s directions. This includes completing the assigned pre-class reading/videos and pre-class quizzes (found on Brightspace, as well as other tasks as assigned).
- **Punctuality:** arrive on time for class and be prepared to participate.
- **Participation:** due to the team-oriented nature of this course, your consistent and enthusiastic participation in all parts of the course is important. Failure to participate in class will be considered equivalent to an unexcused absence.

Absences

- If you know you will miss a class session, you must **communicate with your instructor and GTA as soon as you become aware that you will be absent**. Your instructor and GTA should expect to be aware of your absence before class (except under extraordinary situations).
- You should also **communicate with your teammates** as a professional courtesy and/or to ensure you are aware of the topics being covered during the missed class.
- You are responsible for catching up on all information presented in class in preparation for the next class.
- **Failure to communicate** with your instructor will result in an **unexcused absence**. In this case, materials that were collected and/or graded will not be accepted. No opportunities will be provided for you to make up missed work.
- For all unexcused absences, **assignment deadlines will still apply** unless otherwise arranged with your instructor and GTA. If you miss a quiz, you will receive a zero. Remember the lowest score of each quiz category will be dropped.
- **Students having an excessive number of absences** (more than two of the regularly scheduled class meetings) may be dropped 1/3 of a letter grade (e.g. from A to A- or B+ to B) regardless of their class standing. Each additional unexcused absence beyond two may result in an additional deduction of 1/3 of a letter grade.

Excused Absences include:

- **An approved ODOS absence** from the Office of the Dean of Students. Access the [Purdue Office of Dean of Students - Absences](#) here.
- **Documented chronic or long-term illness.** In this case, please obtain documentation from the Office of Dean of Students, and see your instructor and/or GTA. This should be done upon returning to class so that an effective course of action can be determined.
- **Other situations** may be excused at the **discretion of your instructor.**

University Policies

Classroom Guidance Regarding Protect Purdue

Any student who has substantial reason to believe that another person is threatening the safety of others by not complying with Protect Purdue protocols is encouraged to report the behavior to and discuss the next steps with their instructor. Students also have the option of reporting the behavior to the [Office of the Student Rights and Responsibilities](#). See also [Purdue University Bill of Student Rights](#) and the Violent Behavior Policy under Student Success Resources in Brightspace.

Academic Integrity

You are a member of the Purdue community—a community that values integrity. You are expected to be familiar with and to abide by the university policies and procedures. Academic integrity is critically important and is as essential in virtual learning as in traditional classrooms. Your experience in ENGR 133 depends on the effort you put into the class. Plagiarism and cheating degrade the skills you will develop that will help you succeed as an engineering student and a practicing engineer. Remember, you are forming your engineering habits for ethical work and integrity as an engineer in these undergraduate years.

- [Statement of Integrity and Code of Conduct](#)
- [Code of Honor](#)

You are also expected to fulfill Purdue's student-created honor pledge:

**“As a Boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do.
Accountable together –We are Purdue.”**

Academic dishonesty is defined by Purdue as “cheating, plagiarism, or knowingly furnishing false information to the University.” Academic dishonesty includes, but is not limited to the following:

- Collaborating with others, either face-to-face or online, during a quiz or exam
- Submitting homework obtained from another student
- Allowing someone else to do the work and then submitting it under your own name
- Helping someone else commit academic dishonesty, such as giving them homework to copy or allowing them to cheat from your test paper
- Copying word for word or lifting phrases or special terms from a source or reference without proper attribution (plagiarism)
- Allowing someone else to access your Purdue computer accounts or computer files
- Turning in an exam, quiz, or assignment that has been purchased from a commercial research firm or obtained from the Internet

Academic integrity is one of the highest values that Purdue University holds. Individuals are encouraged to alert university officials to potential breaches of this value by either emailing integrity@purdue.edu or by calling 765-494-8778. While you may submit information anonymously, the more information you provide the greater the opportunity for the university to investigate the concern.

In ENGR 133, you will submit both individual and team assignments. While team assignments are understood to be the work of a team, the individual assignments you submit must be your own work. The FYE instructional team periodically checks student work for various forms of academic dishonesty. This check is performed manually and also via automated similarity checkers such as [MOSS](#). If academic dishonesty occurs, consequences may include:

- A zero on the entire assignment or quiz/exam in question
- Forwarding your name to the Office of the Dean of Students
- A lowered or failing grade in the course

Material Copyrights

The ENGR 133 materials and their notes are copyrighted or derivatives of copyrighted materials and should not be sold, bartered, or posted on sites such as Course Hero, Chegg, and Quizlet in whole or in part without express permission from your instructor *and* the Associate Head of First-Year Engineering.

Nondiscrimination Statement

In this course, each voice in the classroom has something of value to contribute. Please take care to respect the different experiences, beliefs and values expressed by students and staff involved in this course. We support Purdue's commitment to diversity, and welcome individuals of all ages, backgrounds, citizenships, disabilities, education, ethnicities, family statuses, genders, gender identities, geographical locations, languages, military experience, political views, races, religions, sexes, sexual orientations, socioeconomic statuses, and work experiences. More details are available on our course Brightspace table of contents, under **Student Success Resources**, including a hyperlink to Purdue's full Nondiscrimination Policy Statement.

Accessibility

Purdue University strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please discuss options with your instructor. You are also encouraged to contact the Disability Resource Center (contact information below). If you are eligible for academic accommodations because you have a documented disability that will affect your work in this class and/or at an exam, please schedule an appointment with your instructor as soon as possible to discuss your needs. Prior to the meeting, provide your "Letter of Accommodation" that you obtained from the Disability Resource Center (DRC: drc@purdue.edu or 765-494-1247) so that your instructor and the IST can make proper accommodations for you.

Students with disabilities whose DRC Course Accessibility Letter (CAL) includes test accommodations must first release their CAL to the instructor, as they may need to schedule to take their exams with the DRC at (<https://olympic.accessiblelearning.com/Purdue>). You must do this at least one week before the exam date listed on the syllabus. The Instructional Support Team will provide the DRC with your exam information. The DRC will administer it and provide the result to your instructor for grade reporting. Students must inform the Instructor and/or GTA immediately of cases where the DRC does not have space so that IST can make other arrangements. Students who fail to follow this process and these deadlines risk not being able to have their accommodations for that exam.

Mental Health/Wellness Statement

- **If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try [WellTrack](#).** Sign in and find information and tools at your fingertips, available to you at any time.
- **If you need support and information about options and resources,** please contact or see the [Office of the Dean of Students](#). Call 765-494-1747. Hours of operation are M-F, 8 am- 5 pm.
- **If you find yourself struggling to find a healthy balance between academics, social life, stress, etc.,** sign up for free one-on-one virtual or in-person sessions with a [Purdue Wellness Coach at RecWell](#). Student coaches can help you navigate through barriers and challenges toward your goals throughout the semester. Sign up is free and can be done on BoilerConnect.

- **If you're struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students.** If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact [Counseling and Psychological Services \(CAPS\)](#) at 765-494-6995 during and after hours, on weekends and holidays, or by going to the CAPS office on the second floor of the Purdue University Student Health Center (PUSH) during business hours. The [CAPS website](#) also offers resources specific to situations such as COVID-19.

Basic Needs Security

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. There is no appointment needed and Student Support Services is available to serve students 8 a.m.-5 p.m. Monday through Friday. Considering the significant disruptions caused by the current global crisis as it relates to COVID-19, students may submit requests for emergency assistance from the [Critical Need Fund](#)

Emergency Preparation

Purdue University has an Integrated Emergency Management Plan (IEMP). This plan includes procedures, processes, and plans for responding to an emergency. Visit the [Emergency Preparedness](#) website for more information. Keep your cell phone on to receive a PurdueALERT text message. When on campus, it is also important to be familiar with the emergency response procedures for your location.

Procedures specific to the ENGR 133 classrooms are below:

Emergency: For ANY emergency, call 911 (fire, medical emergency, etc.)

- ARMS B061: Phone is in the corner of the room by the podium.
- ARMS B098: Phone is in the internal hallway by the supply shelves.
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Fire Alarm or Evacuation: Gather all critical personal belongings and exit the building using the stairs. When exiting the building, do not use the elevator. Once outside the building, stay clear of all emergency vehicles and personnel.

- ARMS B061: Proceed up the stairs by Amelia's Cafe.
- ARMS B098: Proceed up the stairs by B122 (away from Amelia's).
 - For both ARMS locations, Meet in the emergency assembly area in the grass between Civil Engineering and the Johnson Hall of Nursing
- SHRV C111: Exit the building via the east or west stairwells on the north side of the building. Once outside of Shreve Hall, meet across the street in the Band Practice Field.

Shelter in Place: Could occur due to tornado, accidental release of toxic chemicals, shots fired on campus, etc.

Tornado: Stay in the classroom.

- ARMS B098/B061: stay in the classroom, move away from any glass, and sit on the floor facing a wall and cover your head.
- SHRV C111: proceed to a classroom in the basement, move away from any glass, and sit on the floor facing a wall and cover your head.

In any situation, follow instructions from emergency response personnel (police, fire department, etc.) when they are present. In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted onto the course website or can be obtained by contacting the instructors or TAs via email or phone. You are expected to read your @purdue.edu email on a frequent basis.