PURDUE UNIVERSITY®

Fall 2023 Syllabus

Course Information

- **Course:** ENGR 13100 - Transforming Ideas to Innovation I
- **Modality:** Face-to-Face
- **Credit Hours:** 2.0
- **Prerequisite:** None
- **Course Sections:**

Sec #	CRN	Meeting Times	Classroom	Brightspace Page
021	17093	Wed & Fri at 7:30 AM-9:20 AM	LMBS 3285	Fall 2023 ENGR 13100-021 SD
022	11805	Wed & Fri at 9:30 AM-11:20 AM	LMBS 3285	Fall 2023 ENGR 13100-022 SD
023	11803	Wed & Fri at 11:30 AM-1:20 PM	LMBS 3285	Fall 2023 ENGR 13100-023 SD
024	17073	Wed & Fri at 1:30 PM-3:20 PM	LMBS 3285	Fall 2023 ENGR 13100-024 SD
111	24504	Tue & Thu at 7:30 AM-9:20 AM	LMBS 3261	Fall 2023 ENGR 13100-111 SD
115	20919	Tue & Thu at 3:30 PM-5:20 PM	LMBS 3261	Fall 2023 ENGR 13100-115 SD
122	11797	Wed & Fri at 9:30 AM-11:20 PM	LMBS 3261	Fall 2023 ENGR 13100-122 SD
124	14933	Wed & Fri at 1:30 PM-3:20 PM	LMBS 3261	Fall 2023 ENGR 13100-124 SD
125	11798	Wed & Fri at 3:30 PM-5:20 PM	LMBS 3261	Fall 2023 ENGR 13100-125 SD
221	24423	Wed & Fri at 7:30 AM-9:20 AM	LMBS 3239	Fall 2023 ENGR 13100-221 SD
222	11809	Wed & Fri at 9:30 AM-11:20 AM	LMBS 3239	Fall 2023 ENGR 13100-222 SD
223	11806	Wed & Fri at 11:30 AM-1:20 PM	LMBS 3239	Fall 2023 ENGR 13100-223 SD
LC1	17096	Wed & Fri at 3:30 PM-5:20 PM	LMBS 3285	Fall 2023 ENGR 13100-LC1 SD
SC2	11810	Tue & Thu at 9:30 AM-11:20 AM	LMBS 3261	Fall 2023 ENGR 13100-SC2 SD
SC3	11811	Tue & Thu at 1:30 PM-3:20 PM	LMBS 3261	Fall 2023 ENGR 13100-SC3 SD
SC4	20921	Tue & Thu at 3:30 PM-5:20 PM	LMBS 3285	Fall 2023 ENGR 13100-SC4 SD

Instructors Contact Information

See the **Contacts** below and in Brightspace for names and contact information for your section's instructor and GTA.

Sec #	Name	Email	Office Hours
021	Prof Kathleen Wible	wible@purdue.edu	*
022	Prof Kathleen Wible	wible@purdue.edu	*
023	Prof Mohamad Zbib	mzbib@purdue.edu	*
024	Prof Kathleen Wible	wible@purdue.edu	*
111	Prof Amena Shermadou	ashermad@purdue.edu	*
115	Prof Jason Morphew	jmorphew@purdue.edu	*
122	Prof Amena Shermadou	ashermad@purdue.edu	*
124	TBD		*
125	Prof Helmi		*
221	Prof Mac McFall	gmcfall@purdue.edu	*
222	Prof Mac McFall	gmcfall@purdue.edu	*
223	Prof Mac McFall	gmcfall@purdue.edu	*

LC1	Prof Robert Loweth	rloweth@purdue.edu	*
SC2	Prof Aris Carrillo	carril11@purdue.edu	*
SC3	Prof Joyce Main	jmain@purdue.edu	*
SC4	Prof Aris Carrillo	carril11@purdue.edu	*

*Please see your Brightspace section for office hours and/or help session information.

Course Description

A partnership between Schools and Programs within the College of Engineering, introduces students to the engineering professions using multidisciplinary, societally relevant content. Developing engineering approaches to systems, generating and exploring creative ideas, and use of quantitative methods to support design decisions. Explicit model-development activities (engineering eliciting activities, EEAs) engage students in innovative thinking across the engineering disciplines at Purdue. Experiencing the process of design and analysis in engineering including how to work effectively in teams. Developing skills in project management, engineering fundamentals, oral and graphical communication, logical thinking, and modern engineering tools.

Learning Resources, Technology & Texts

While there is no required textbook for ENGR 13100, video modules (Pre-Class Videos) are required and will be used as background resources. You will use the following instructional technologies in ENGR 13100.

- **Brightspace:** Within Brightspace, you will have access to course announcements, schedules, assignments, quizzes, exams, grades, feedback, and course resources. (Link to Brightspace)
    - **Preferred browser:** Desire to Learn (D2L) recommends Apple Safari, Google Chrome, Microsoft Edge, or Mozilla Firefox when accessing Brightspace. If you are using another browser, you may be unable to access some Brightspace content.
- **CATME:** You will use CATME to submit information used for Team Formation and Peer & Team Evaluations (Link to CATME).
- **Gradescope:** All in-class exams are administered via Gradescope. You will access this through your ENGR 131 Brightspace section during your course.
- **Messaging Tools:** Your section may use a messaging tool, such as Microsoft Teams, Slack, or Discord, to promote further communication between the teaching team and students. See your section's Brightspace, class slides, or email from your instructor/GTA regarding this.
- **MS Office:** Word, Excel, and PowerPoint. ENGR 131 requires Excel 2016 or newer. Updated versions can be found online through Office 365 which is free to Purdue students (Purdue Office 365).
- **Purdue Email**: Communication regarding the course may come to your Purdue email. Check your Purdue email regularly and often. Always respond or start an email to your instructor and/or GTA using your Purdue email.
- **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.

Help Sessions

Graduate teaching assistants and peer teachers provide ENGR 13100 help sessions each week. Attendance at help sessions is an opportunity for you to receive guidance in determining answers to specific questions. See Brightspace for scheduled times. Additional help is also available from your GTA and Instructor; contact them for more information.

Class Organization

- This is a project and team-based course involving authentic engineering situations. Because this course engages you in authentic engineering situations, you will work collaboratively on multiple team projects in this team-based environment. You will learn how to effectively work on a diverse team.
- Each section of ENGR 13100 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.
- Course meetings are 110 minutes long and the course meets two days per week. All sections meet face-to-face. Note that lecture recordings may not be available in your section. Other methods of delivery may be used as appropriate and will be communicated.
    - You are required to attend the lecture during the scheduled class time. See also **Attendance Policy**.
    - Once team assignments begin, you are expected to have regular team meetings and work collaboratively on team projects and assignments.
- ENGR 13100 follows the model of a **flipped classroom**. Before class, you will watch videos related to course topics (also called pre-class videos). In class, you will work on activities, individually or in teams, related to the day's topics. In essence, assignments and activities that are traditionally considered as homework are initiated during class.
- The teaching team will be available during class time, so you can obtain help with understanding course topics and assignments from the various members of your teaching team.

Learning Outcomes

In ENGR 13100, you will:

- Develop and evaluate mathematical models to describe or predict outcomes associated with engineering decisions.
- Use a systematic design process to develop innovative solutions to engineering challenges, compare design alternatives, and gather and use evidence for decision making.
- Examine and analyze information from various engineering schools at Purdue to make informed decisions about your choice of an engineering major.
- Practice making evidence-based engineering decisions.
- Work in diverse teams.
- 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.

See the detailed learning objectives for this course in Brightspace.

Assignments

In this course, the teaching team will assess your performance using the work you submit in four categories – quizzes, individual assignments, team assignments, and exams. Each of these assessments will include detailed instructions on what work to do, how it will be evaluated, when it is due, and how to submit it. It is your responsibility to follow the instructions on individual assignments, complete the work on your own, and submit it on time. Similarly, each team member is responsible for contributing a fair share the work on a team assignment and making sure it is submitted on time.

Late Work

On-time submission of your work is vital to successful performance in this course. Late work is only accepted as specified in the following cases:

- **Submitting late individual work without penalty**: You may submit late individual assignments without penalty only when you have an Office of the Dean of Students (ODOS) approved absence. In these situations, arrange submission of your late work with your graduate teaching assistant (GTA) or instructor.
- **Submitting late individual work with a 25% penalty**: On individual assignments, you may submit work up to 24 hours late, but you will incur a deduction of 25% of the maximum possible points.
- No work may be submitted after the 24-hour late period without specific exception from your instructor.
- **Any team assignments** being submitted after the specific due date may be subject to a root cause analysis protocol, completed by your team, as facilitated by your GTA or instructor.
- CATME Team Formation surveys and Peer & Team Evaluations may not be completed after the due date.

Grading Scale

Grades are assigned according to the percentage of available points earned as detailed in the tables below. Note that to move on to ENGR 13200, your final grade in ENGR 13100 must be a C- or better. There is no rounding of grades in ENGR 131.

Grade	Value
A	Greater than or equal to 94.0%
A-	Greater than or equal to 90.0% and less than 94.0%
B+	Greater than or equal to 87.0% and less than 90.0%
B	Greater than or equal to 84.0% and less than 87.0%
B-	Greater than or equal to 80.0% and less than 84.0%
C+	Greater than or equal to 77.0% and less than 80.0%
C	Greater than or equal to 74.0% and less than 77.0%
C-	Greater than or equal to 70.0% and less than 74.0%
D	Greater than or equal to 60.0% and less than 70.0%
F	Less than 60.0%

Category	Percentage of Final Course Grade (%)
Engineering Your Major/Career Exploration Activities	~4
Exams	~35
Individual Assignments	~16
Pre-Class Quizzes	~4
Team Assignments	~41

Grading & Feedback

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.

Regrade Requests

If you have concerns about how an assignment or exam was graded, submit a **Regrade Request Form** (in Brightspace) to your graduate teaching assistant (GTA) with a detailed description of the concern.

- Regrade requests are only open for a limited time after grades have been posted – 7 days normally, but less at the end of the semester.
- Your request must be concise and professional. Please see **Communication with the Teaching Team** (under Professional Expectations below) for proper communication etiquette.
- If the regrade request is approved by the teaching team, your assignment or exam will be completely regraded. The updated grade may increase, decrease, or stay the same, depending on the outcome of the regrade process.

Teaming

You will be assigned to a team in this course. On this team, you will complete several assignments and activities. Your performance as a team member is part of your course grade. Failure to adequately and professionally engage in team activities may result in individual loss of credit on work that was turned in as a team. Past ENGR 13100 students have found their teaming experience in this course to be worthwhile and rewarding.

Professional Expectations

Each Professional Expectation (PE) in ENGR 13100 reinforces the idea that everyone in our learning environment helps shape the environment so that it is positive and productive for all. This includes arriving for class on time and being prepared, listening and taking notes during the lecture, focusing on course activities during class, controlling your behavior to minimize distractions to those around you, and engaging with others in a respectful and professional manner.

Professional Expectations Deductions

The instructional team may deduct points from your semester total for behavior that is disruptive to your class or to your team's dynamics and performance.

Communicating with the Teaching Team

When communicating with members of your ENGR 13100 teaching team, your email must originate from *your Purdue email account* and include:

- your name
- ENGR 13100, 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 13100 included (e.g., "ENGR 13100: 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"),
- concludes with an expression of appreciation for the reader's time or help.

Allow at least 24 hours for emails to be answered.

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 is the same as not completing assignments and will be considered equivalent to an unexcused absence.

The teaching team will take attendance shortly after class starts. You will be marked present if you are in your seat and absent if you are not. If you arrive late, you are responsible for quietly checking in with the teaching team to request that your absence be changed to a tardy; not all requests will be granted.

Excused Absences

- **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.

Unexcused 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** and before the missed class (except in extraordinary situations).
- **Failure to communicate** with your instructor will automatically result in an **unexcused absence**.
- You must communicate with your teammates, as a professional courtesy, to ensure you are aware of the topics being covered during the missed class and to coordinate work on team activities.
- You are responsible for reviewing all missed content, completing any missed work, and preparing for your return to class.

Unexcused absence penalties

Category	Definition	Attendance Record	Absence Count
Present	Seated with team at start of class.	P	0
Tardy	Late arrival or early dismissal not approved by the designated teaching team member.	T	0.5
Absent	Did not attend class.	A	1

- Your unexcused absence total is the sum of your tardy and absence counts.
- You are allowed up to three total unexcused absences that can be taken for any reason without penalty. Each additional unexcused absence will result in a grade penalty.
    - The absence penalty is -20 points for every additional absence.
    - The tardy penalty is ½ of an unexcused absence (-10 points for every additional tardy).

    - These point deductions will begin after the allowed 3 total unexcused absences.
- If you have **more than six total unexcused absences, you will fail the course** regardless of your class standing.

Example: A student has three unexcused tardies and two unexcused absences, and so has 3.5 total unexcused absences. This student will receive a 10-point deduction off their total grade.

Example: A student has zero unexcused tardies and five unexcused absences, and so has 5.0 total unexcused absences. This student will receive a 40-point deduction off their total grade.

Academic Guidance in the Event of Quarantine/Isolation

If you must miss class at any point in time during the semester, please reach out to your instructor via Purdue email so that you and your instructor can communicate about how you can maintain your academic progress. Students who experience any type of extended health issue would benefit from engagement with the Academic Success Center.

Classroom Guidance Regarding Protect Purdue

For up-to-date details regarding Purdue's current Protect Purdue Pledge and protocols, please visit Protect.Purdue.edu.

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 University Resources in Brightspace.

Academic Integrity

You are a member of the Purdue community – a community that values integrity. Academic integrity is your pledge, as a member of the Purdue Engineering community, to uphold high standards of responsibility and honor in all your academic work. Your integrity is just as crucial to your engineering career as your technical knowledge. Academic dishonesty harms both. Build a strong foundation for ethical work and honorable standards as an engineer in your undergraduate years.

You will be assessed in this course using individual and team submissions. When you complete anything designated as individual, everything you submit must be your own unique work. When completing anything designated as team, everything you submit must originate within the team and be the team's own unique work.

Your work in this class should 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."

To maintain academic integrity, comply with course and University policies. You will be held to the standards explained in these documents and to university regulations for student conduct.

- Course Academic Integrity Policy
- Statement of Integrity and Code of Conduct
- Academic Integrity and You: Undergraduate Edition

Submitted work will be periodically checked for various forms of academic dishonesty.

Academic integrity is one of the highest values that Purdue University holds. Incidents of academic misconduct in this course will be addressed by the course instructor. Any violation of course policies relating to academic integrity will result minimally in a failing or zero grade for that assignment/exam,

and at the instructor's discretion may result in a failing grade for the course. Incidents of academic misconduct will be referred to the Office of Student Rights and Responsibilities (OSRR) for review, where university penalties may be considered.

Material Copyrights

The ENGR 131 materials and their notes are copyrighted or derivatives of copyrighted materials and shall 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.

Usage of Recordings

Course recordings are made available for students and should only be used for reviewing the content of the class. Course recordings may not be shared in whole or in part outside of ENGR 131 and shall not be uploaded to any external sites.

Nondiscrimination Policy Statement

Purdue University is committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. A hyperlink to Purdue's full Nondiscrimination Policy Statement is included in our course Brightspace under University Policies.

Accessibility

Purdue University is committed to an inclusive and welcoming experience for all students. To that end, the Disability Resource Center (DRC) provides services, resources, and programs to facilitate equal access for disabled students, resulting in their full participation in curricular and co-curricular offerings.

If you anticipate or experience physical or academic barriers based on disability, you are encouraged to contact the Disability Resource Center (DRC: drc@purdue.edu or 765-494-1247). If you are eligible for academic accommodations because you have a documented disability that will affect your work in this class and/or for an exam, please schedule an appointment with your instructor as soon as possible to discuss your needs.

Students with disabilities whose DRC Course Accessibility Letter (CAL) includes test accommodations, may need to schedule taking their exams at the DRC. Students must inform the instructor and GTA immediately of cases where the DRC does not have space so that other arrangements can be attempted. Students who do not follow this process risk not being able to have their accommodations for that exam.

Mental Health/Wellness Statement

Purdue University is committed to advancing the mental health and well-being of its students.

- **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, 765-494-1747. Normal drop-in hours 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 of 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 important to:

- Follow instructions from emergency response personnel (police, fire department, etc.) when they are present.
- Be familiar with the emergency response procedures for your location.

Procedures specific to the ENGR 131 classrooms are below:

General Emergency

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

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. Meet your classmates north of Lambertus Hall (LMBS) by Mechanical Engineering (ME).

Shelter in Place

Could occur due to various situations, such as a tornado, accidental release of toxic chemicals, or an active threat (e.g. shots fired on campus).

- **Tornado:** Proceed down the stairs to the basement of Lambertus Hall (LMBS). Be prepared to sit (or kneel) on the floor, face a wall, and cover your head.
- **Other situations:** The course of action will depend upon the situation. It is recommended that student remain in the classroom and wait for further instructions.

Course Adjustments

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 instructor or GTA via email. You are expected to read your @purdue.edu email on a frequent basis.