

Course Information

Course Number & Title: ENGR 13200 – Transforming Ideas to Innovation II

Credit Hours: 2.0

Modality: Face-to-Face

Prerequisites: ENGR 13100

Sec #	CRN	Meeting Times	Classroom	Brightspace Page
011	63528	Tues & Thurs 7:30-9:20 AM	LMBS 3285	Spring 2024 13200-011 SD
012	63531	Tues & Thurs 9:30-11:20 AM	LMBS 3285	Spring 2024 13200-012 SD
013	63532	Tues & Thurs 11:30 AM-1:20 PM	LMBS 3285	Spring 2024 13200-013 SD
014	63529	Tues & Thurs 1:30-3:20 PM	LMBS 3285	Spring 2024 13200-014 SD
015	15179	Tues & Thurs 3:30-5:20 PM	LMBS 3285	Spring 2024 13200-015 SD
024	15449	Wed & Fri 1:30-3:20 PM	LMBS 3285	Spring 2024 13200-024 SD
112	15186	Tues & Thurs 9:30-11:20 AM	LMBS 3261	Spring 2024 13200-112 SD
113	14961	Tues & Thurs 11:30 AM-1:20 PM	LMBS 3261	Spring 2024 13200-113 SD
115	10915	Tues & Thurs 3:30-5:20 PM	LMBS 3261	Spring 2024 13200-115 SD
122	15185	Wed & Fri 9:30-11:20 AM	LMBS 3261	Spring 2024 13200-122 SD
124	15182	Wed & Fri 1:30-3:20 PM	LMBS 3261	Spring 2024 13200-124 SD
222	15189	Wed & Fri 9:30-11:20 AM	LMBS 3239	Spring 2024 13200-222 SD
223	15190	Wed & Fri 11:30 AM-1:20 PM	LMBS 3239	Spring 2024 13200-223 SD
224	15193	Wed & Fri 1:30-3:20 PM	LMBS 3239	Spring 2024 13200-224 SD
SC1	15173	Wed & Fri 9:30-11:20 AM	LMBS 3285	Spring 2024 13200-SC1 SD
LC1	15180	Wed & Fri 11:30 AM-1:20 PM	LMBS 3285	Spring 2024 13200-LC1 SD

Instructor Contact Information

Instructor information is provided in the following table. Instructor contact information is also provided in Brightspace along with graduate teaching assistant (GTA) contact information.

Section #	Name	Email
011/012/SC1	Jeannete Aguilar	aguila33@purdue.edu
013	Brent Jesiek	bjesiek@purdue.edu
014/015	Beatriz Galarza	bgalarza@purdue.edu
024	Amena Shermadou	ashermad@purdue.edu
112	Matt Ohland	ohland@purdue.edu
113	Mohamad Zbib	mzbib@purdue.edu
115	Robert Loweth	rloweth@purdue.edu
122	Tiantian Li	li1596@purdue.edu
124	Mac McFall	gmcfall@purdue.edu
222/223	Kathleen Wible	wible@purdue.edu
224	Kirsten Davis	kad@purdue.edu
LC1	Sean Brophy	sbrophy@purdue.edu

Course Description

A partnership between schools and programs within the College of Engineering continues building on the foundation developed in ENGR 13100. Students take a more in depth and holistic approach to integrating multiple disciplines perspectives while constructing innovative engineering solutions to open-ended problems. Extending skills in project management engineering fundamentals, oral and graphical communication, logical thinking, team work, and modern engineering tools (e.g., Excel and MATLAB). Typically offered Fall Spring Summer.

Learning Outcomes

In ENGR 132, you will learn to:

- Apply basic programming concepts to the solution of engineering problems
- Represent and interpret data in multiple formats
- Develop, select, modify, and justify mathematical models to solve an engineering problem
- Function effectively as a member of a student team, and
- Demonstrate habits of a professional engineer

See the detailed learning objectives for this course in Brightspace.

Learning Resources, Technology, & Texts

There is no required textbook for ENGR 132. You will use the following instructional technologies in ENGR 132:

- **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:** You will submit homework assignments and exams to Gradescope for grading. You will access this through your ENGR 132 Brightspace section during the semester.
- **MATLAB:** Purdue offers a free campus-wide MATLAB license to current students. You may set up your account with Mathworks via <https://www.mathworks.com/academia/tah-support-program/eligibility.html>. Just fill out the required information on the form and click the Submit button. Then you may use the online version or download the license to your PC.
- **MATLAB Drive:** You will access files via MATLAB Drive for in-class activities, assignments, project milestones, and exams. The links for the MATLAB Drive folders are provided via Brightspace.
- **Messaging Tools:** Your section may use a messaging tool, such as Slack or Discord. See your section's Brightspace, class slides, or email from your instructor/GTA regarding this.
- **MS Office:** Word, Excel, and PowerPoint. ENGR 132 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:** The teaching team will communicate using 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.

Course Structure

Each section of ENGR 132 is taught by a teaching team that includes an instructor, a graduate teaching assistance (GTA), undergraduate teaching assistants called Peer Teachers, and undergraduate graders. Course meetings are

110 minutes long and the course meets two days a week. All sections meet face-to-face. You are required to attend the lecture during the scheduled class time (see also [Attendance Policy](#)).

Course Schedule

The course schedule will be provided to students on the section's Brightspace page. Schedule and assignments are subject to change throughout the semester. Any changes will be updated in Brightspace.

Teaming

This is a project and team-based course. You will work in a collaborative learning environment on multiple assignments and a team project, involving authentic engineering situations. You will learn how to effectively work on a diverse team. Once team assignments begin, you are expected to have regular team meetings and work collaboratively on team projects and assignments. 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 (see [Professional Expectations](#)). Past ENGR 132 students have found their teaming experience in this course to be worthwhile and rewarding.

Assignments

ENGR 132 follows a flipped classroom model. Before class, you will watch videos and take quizzes related to course topics called Pre-Class Quizzes (PCQs). In class, you will work on activities, individually or in teams, related to the day's topics. Assignments and activities that are traditionally considered as homework are started in 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.

In this course, the teaching team will assess your performance using the work you submit in four categories – pre-class 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 Policy

On-time submission of your work is vital to successful performance in this course. Read each of your assignment's instructions to see if late work is permitted.

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 (see [Excused Absences](#)). 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:** When late submissions are permitted, you may submit your work up to 24 hours late, but you will incur a deduction of 25% of the maximum possible points for the assignment.
- **Team Assignments:** Late submission of team work is not permitted.
- **CATME Assignments:** Late submissions of the Team Formation Survey or Peer & Team Evaluations is not permitted.

No work may be submitted after the 24-hour late period without specific exception from your instructor.

Help Sessions

ENGR 132 provides help sessions as an opportunity for you to receive guidance in determining answers to specific questions on assignments. See Brightspace for scheduled times and locations as well as general help session guidelines. Additional help is also available from your instructor; contact them for more information.

Grading Scale

Grades are assigned according to the percentage of available points earned as detailed in the table below. Note that to successfully pass ENGR 132, your final grade must be a C- or better. There is no rounding of grades in ENGR 132. There are four categories of assignments that make up the final grade: Pre-Class Quizzes (10%), Individual Assignments (34%), Team Assignments (26%), & Exams (30%).

Grade	Grade Value
A	Greater than or equal to 94%
A-	Greater than or equal to 90% and less than 94%
B+	Greater than or equal to 87% and less than 90%
B	Greater than or equal to 84% and less than 87%
B-	Greater than or equal to 80% and less than 84%
C+	Greater than or equal to 77% and less than 80%
C	Greater than or equal to 73% and less than 77%
C-	Greater than or equal to 70% and less than 74%
D	Greater than or equal to 60% and less than 70%
F	Less than 60%

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. This feedback will help you improve your understanding of the concepts being assessed and, in turn, improve your performance on future work.

Regrade Requests

Most grading for this course will happen in Gradescope. If you have concerns about how an assignment or exam problem was graded, use Gradescope's Regrade Request tool to submit 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 regrade 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 problem will be completely regraded. The updated grade may increase, decrease, or stay the same, depending on the outcome of the regrade process.

Professional Expectations

Each Professional Expectation (PE) in ENGR 132 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 to 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 132 teaching team, your email must originate from your Purdue email account and include:

- your name
- ENGR 132, 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 13200 included (e.g., “ENGR 132: Question about A04”),
- 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 in assignment A04”),
- concluded 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 will be considered equivalent to an unexcused absence.

Excused Absences

- An **approved ODOS absence** from the Office of the Dean of Students. Under academic regulations, excused absences may be granted by ODOS for cases of grief/bereavement, military service, jury duty, parenting leave, or emergent medical care.
- **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. You are expected to communicate absences to your instructor and GTA before class (except under extraordinary situations).
- **Failure to communicate with your instructor** will automatically result in an **unexcused absence.**
- You should also 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 the course projects.
- You are responsible for catching up on all information presented in class in preparation for the next class.

In-Class Attendance Procedures

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.

Category	Definition	Attendance Record	Absence Count
Present	Seated with team at the start of class.	P	0
Tardy	Late arrival or early dismissal not approved by the teaching team.	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.

University Policies

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 work on individual assignments, your submissions must represent your unique work. For team assignments, all submissions must originate from the team, reflecting the team's collective effort. Originality in code not only demonstrates a student's understanding and mastery of the material but also ensures a fair and equitable assessment of their skills and knowledge. It serves as a fundamental measure of a student's ability to apply what they have learned in the course to solve specific problems.

You are expected to submit solutions that are your own creation. You, individually or in a team, must design and develop your solutions without copying from or sharing with any outside sources (including, but not limited to, peers, electronic sharing sites, or generative AI tools). Failure to submit your own unique solutions undermines the learning process and violates the trust and expectations set by Purdue and the engineering community.

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. This check is performed manually and with similarity checkers such as [MOSS](#).

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.

Use of Artificial Intelligence

Generative AI is a tool with strengths and weaknesses, just like any other tool. Good engineers use tools to strengthen their problem-solving and critical-thinking skills. They understand their tools and use those tools ethically. Before you use generative AI, you need to understand how it can help you and what its limitations are. You are responsible for using generative AI in an ethical manner that supports and enhances your learning. The course academic integrity policy provides you with more detailed information about how to use generative AI appropriately [\[link\]](#). You must be familiar with and abide by these policies. They are summarized below.

You are prohibited from using generative AI to undermine or devalue the learning experience for yourself or your classmates.

- Never ask generative AI to do a problem for you; always attempt your own solution before asking AI for help.
- Never plagiarize the output from a generative AI tool.
- Never use generative AI during an exam.
- Never submit any part of any course materials, which are copyrighted and cannot be shared outside the classroom without permission, to a generative AI platform.

Failure to follow the course guidelines for generative AI use is a violation of academic integrity and has the same penalties.

Material Copyrights

The ENGR 132 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.

Usage of Recordings

Course recordings may be made available for students and should only be used for reviewing the content of the class. Course recordings may not be shared outside of ENGR 132 and shall not be uploaded to any external sites.

Nondiscrimination 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. We strive to make learning experiences accessible to all participants. 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@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, you will use your DRC Course Accessibility Letter and work with your instructor as soon as possible to discuss your needs.

Students with disabilities whose DRC Course Accessibility Letter includes test accommodations will work through your instructor and the FYE Instructional Support Team, so they can ensure proper accommodations are made. In some cases, exams may need to be scheduled with Purdue Testing Services (PTS) at

<https://www.purdue.edu/studentsuccess/testing-services/accommodated-testing/student.php>. You must do this at least four calendar days before the exam date listed on the syllabus. The FYE Instructional Support Team will provide PTS with your exam information. PTS will administer and proctor the exam for you. Students must inform the Instructor and GTA immediately of cases where PTS does not have space so that the FYE Instructional Support Team 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.

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.

Emergency Preparedness

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 and follow the instructions from emergency response personnel (police, fire department, etc.) when they are present.

Procedures specific to the ENGR 132 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, an active threat (e.g., shots fired on campus).
- **Tornado:** Proceed down the stairs to the basement of Lambertus Halls (LMBS) Be prepared to sit (or kneel) on the floor, face a wall, and cover your head.
 - **Other situations:** The course of action would depend on the situation. It is recommended that students remain in the classroom and wait for further instructions.

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