



Syllabus

E C E 203 – Signals, Information, & Computation Spring 2026

Key Course Offering Information

General Identifying Information

Credits: 3

Canvas Course URL: <https://canvas.wisc.edu/>

Meeting Time & Location:

- LEC 001: Tuesday and Thursday, 11:00 AM - 12:15 PM in Wendt Commons 410
- LEC 002: Tuesday and Thursday, 9:30 AM - 10:45 AM in Engineering Hall 3654

Instructional Modality: In-person

Requisites: (MATH 211, 217, 221, or 275) or member of Engineering Guest Students

Course Description: Introduction to the signals, information, and computational techniques in electrical engineering.

Staff and Office Hours:

Name	Role	Email
Prof. Feng Ye	Instructor (LEC 001)	feng.ye@wisc.edu
Prof. Eduardo R. Arvelo	Instructor (LEC 002)	earvelo@ece.wisc.edu
Wei Lin	TA	wlin77@wisc.edu
Aswin Ramkumar	TA	ramkumar4@wisc.edu
Subham Sabud	TA	sabud@wisc.edu
Jidong Xu	TA	xu629@wisc.edu
Ryan Gomes Paiva	In-Class Peer Coach	-
Yana Gupta	In-Class Peer Coach	-
Daniel Kim	In-Class Peer Coach	-
Michael Plumridge	In-Class Peer Coach	-
Rohan Susarla	In-Class Peer Coach	-

Office hours information will be posted in Canvas. Additional office hours are available by appointment.

Note: While we are here for you and care about your learning in our course, the instructional staff is balancing many responsibilities. Rather than contacting any of us by email, please post your question/concern on Piazza so we can collectively provide answers to your questions in a timely manner. Public posts are preferred to ensure that all students learn from the questions you ask and the answers we (and other students!) provide. However, you may also post privately for personal/private matters.

Course Learning Outcomes

At the completion of this course, students will be able to:

1. Manipulate complex numbers in the context of representing sinusoids
2. Represent periodic continuous-time signals using the Fourier series
3. Represent finite-duration discrete-time signals using the discrete Fourier transform
4. Determine sampling parameters for analog-to-digital conversion of signals
5. Apply digital filters to discrete-time signals
6. Write code using numerical computing software to manipulate signals

How Credit Hours are met by the Course

This class meets for two, 75-minute class periods each week over the fall/spring semester and carries the expectation that students will work on course learning activities (reading, writing, problem sets, studying, etc) for about 3 hours out of the classroom for every class period. The syllabus includes more information about meeting times and expectations for student work.

Regular and Substantive Student-Instructor Interaction

The instructor and students will interact every Tuesday and Thursday during the scheduled class time. The instructor will provide feedback on student work and will facilitate discussion of course content.

Instructor to Student Communication

Course Overview & Structure

The course is an introduction to signal processing and computation with MATLAB. Synchronous meetings on Tuesday and Thursday during the scheduled course period and asynchronous discussions (Piazza) will be used to facilitate communication, learning, and collaboration during the course. Regular and active student engagement is required throughout the course. The course is taught using an *active learning style*, where students watch video lectures outside of class time to become familiar with the lecture content and spend most of the time in class solving activities (period exercises and labs) in groups. This allows students to interact more with the instructors and their peers compared with traditional lecture-style classes. The Instructor and TAs will be available to help you overcome initial obstacles or misconceptions as you apply the material.

Course Components and Grading

The course consists of graded components. The components and their relative weighting for the final grade are shown in the table below.

Assignment	Points	Notes
Video Quizzes (drop lowest three)	5	Due day before class
Pre-Labs (drop lowest)	5	Due day before class
Lab Assignments (drop lowest)	10	Due on Fridays
Classroom Activities (drop lowest two)	20	In class (Period Exercises and Lab Activities)
Two Assessments (15 pts each)	30	In class (see schedule)
Final Exam	30	See schedule
Engagement and group work	1	Bonus point
Total	101	

Details for the components are provided below.

1. Video Lectures and Quizzes

Video lectures are the primary source of content delivery for the course. Video lectures are typically 10-15 minutes each, and there are 1-3 video lectures assigned per week. Video lectures are followed by a short quiz that contains around five questions. Video quizzes are due at 10:59 am and can be taken twice (highest score is kept).

2. Pre-Labs

Pre-Labs are crucial for understanding and being able to complete the Lab Activity during class time. MATLAB will be required to complete the Pre-Labs, which are due at 11:59 pm the day before Lab days (see schedule) and will be graded on correctness.

3. Lab Assignments

Lab Assignments builds on the Lab Activities and are more time-demanding than the Lab Activities. MATLAB will be required to complete the Lab Assignments, which are due at 11:59 pm on Fridays and will be graded on correctness.

4. Classroom Activities

Classroom activities are either Period Exercises or Lab Activities, and are completed in small groups during the scheduled course time. The activities should take less than 75 minutes to complete provided you are prepared for the class, for the content, and are engaged during the class period. Classroom activities will be graded on correctness, **but, if your average score for Classroom Activities is $\geq 85\%$, you will receive full points towards your final grade. If your average score for Classroom Activities is $\geq 70\%$ but $< 85\%$, you will receive 90% of the points towards your final grade.**

5. Assessments and Final Exam

There are two assessments and a final exam. These are a mix of auto-graded computer questions and pen-on-paper questions. See the course schedule on Canvas for dates.

6. Engagement and group work

Active engagement and group work is very important for success in this course. Students who demonstrate high engagement and effective group work will receive up to 1 bonus point towards their final grade. Engagement will be assessed according to the following indicators:

- Consistent attendance
- Participation in Top Hat
- Participation in Piazza

Working with others encourages creativity, fosters accountability, and leads to more innovative and robust solutions. It also builds communication and teamwork skills that are vital in both academic and professional environments. Group work will be assessed according to the following indicators:

- Student volunteers to facilitate discussions on the white board.
- Student remains in class actively working on course-related material until class time concludes.
- Respectful communication is observed with group members, other groups, and the instructors.
- Clear and effective communication is observed.

Course Grading Scale

Assignment of letter grades is based on the following:

Grade	A	AB	B	BC	C	D	F
Score	≥ 92	≥ 87	≥ 81	≥ 77	≥ 67	≥ 57	< 57

Note: we reserve the right to lower thresholds in exceptional circumstances for students with high engagement throughout the term. The thresholds above are firm for students with low engagement.

Late Submission

- Late submissions are allowed, but reduced by 50%.
- Work submitted after manual grading is completed will not be graded.
- The reduction for late work may not occur automatically, but will be applied periodically or at the end of the semester.
- The late work policy does not take effect during the schedule adjustment period.

Expectations for In-Class Participation

To further your learning in this active learning classroom and ensure that all students feel welcome and included, we ask that you adhere to the following expectations for in-class participation:

- During the class periods, you will be sitting at a table with other students. If you do not know each other, take a moment to say hello and (if you do not know each other) introduce yourselves by providing your name and which major you are in. Think about how you can **make everyone feel welcome and included in the collaborations and conversations**. Working effectively in teams that include both people you know and people you are just getting to know is an important part of your preparation to become a successful engineer.
- Bring either a pen and a notepad or a tablet and **actively use them to write down your solution strategy while working on the in-class activities**. This will help you learn the material better and make it easier for you to revise it before the assessments and exams.
- Out of respect for each other, students should to **not use their phones, tablets, or non-lab computers** during class, except to take notes or review course material.
- We expect that you **do your best to understand and finish the in-class activities during class**. The time taken to finish in-class activities will vary between students. It is important to know that **the time needed to finish the in-class activities is not a reflection of how smart you are or whether you will be a good engineer!** After all, you are here to learn. Your instructors, TAs, peer mentors, and classmates are here to help you learn.
- Some students may finish their work before the end of the class. If this is you, please **help other students** if they have questions or are stuck. Remember - the best way to learn is to explain to others!

Course Website and Digital Instructional Tools

- All material will be delivered via **Canvas**: <https://canvas.wisc.edu/>
- Some office hours may be held remotely via Zoom/Teams.
- You will make some use of MATLAB, which is available on the provided classroom computers.
- Asynchronous discussions will take place in Piazza (linked via Canvas).

Subject to Change Notice

All material, assignments, and deadlines are subject to change. It is the student's responsibility to be aware of all course timelines, announcements, and communications pertaining to changes in course assignments and due dates. The instructor will communicate any changes to students well in advance.

How to Succeed in This Course

In summary, to succeed in this course, students are recommended to

- Check your **UW (wisc.edu) email** daily
- Login to the course site daily
- Check the course Piazza site daily
- Actively participate in the class meetings
- Be prepared for every class meeting by completing the pre-class work
- Be proactive seeking answers to your questions
- Create a study schedule and stay current on assignments
- Connect with classmates both in and out of class meetings
- Work on assignments during office hours so you can seek immediate help
- Talk with your instructor immediately if you are struggling or an unexpected issue arises
- Review the following **Netiquette Guidelines**

Student Participation, Preparation Time, and Attendance

- It is critical that you devote enough time to this course. **You should plan on spending an average of 10 hours per week** on the various course components.
- Create a study schedule to stay on track, and plan to visit the course daily to keep up with reading the announcements, participating in the online discussions, completing the activities, etc.
- Successful Participation involves regularly engaging in course learning activities and assessments during the course. It may also involve both individual and collaborative components and will call upon you to develop and practice real world communication, leadership, and teamwork skills by interacting with fellow students, instructors, and other experts.
- Don't wait to ask questions. Ask your peers and instructors in class or office hours.

Communicating with the Instructor

The "Three before me" policy encourages students to check the following sources of information before contacting the instructor: course syllabus, course Announcements, and Piazza posts. This eliminates redundancy and expedites the process. You are encouraged to answer questions from other students when you know the answer, in order to provide timely assistance. If you have questions of a personal nature, relating to a personal emergency, an assignment grade, or other private matter, you are welcome to contact your instructor via email. Please allow up to 24 hours for your instructor to respond.

Collaboration

You are encouraged to discuss activity and assignment problems with your classmates online or in person. However, the work you submit must be your own. This means you wrote all of the code you use and can explain or rederive all results you submit. The instructional staff is available to answer questions on activities and assignments.

Recommendation Letter Requests

Some of you will be applying for graduate school and need recommendation letters to support your application. With very few exceptions, we are unable to provide a recommendation based solely on our interaction in this class. A good recommendation letter - one that will help your application - needs to describe your characteristics and capabilities in detail. It is impossible to develop that level of knowledge based on interaction in a single, large enrollment course. It will be more helpful to your application to include a detailed letter from someone that knows you than to a brief, unspecific letter from the professor in your signal processing course. Depth of knowledge about you is far more important for your application than the expertise of the writer. Hence, we recommend you focus your requests for letters on individuals that have taught you in multiple classes or worked with you outside of the classroom.

Links to Useful Resources

- [University Health Services](#)
- [Undergraduate Academic Advising and Career Services](#)
- [Office of the Registrar](#)
- [Office of Student Financial Aid](#)
- [Dean of Student Office](#)

Discussion and/or Laboratory Sessions

See Course Components and Grading above.

Required Textbook, Software and Other Course Materials

There is no required textbook. All necessary material will be provided via Canvas.

Homework and Other Assignments

See Course Components and Grading above.

Exams, Quizzes, Papers and Other Major Graded Work

See Course Components and Grading above.

General Guidelines for Exam Proctoring

Exams will be proctored. If circumstances require that exams be held remotely, the instructor reserves the right to use proctoring tools such as Honorlock. Failure to use the proctoring service assigned will result in a zero on the exams. Students should be ready to show appropriate identification during exams (in person or remotely).

Course Schedule/Calendar

See Canvas homepage

Academic Policies and Statements

Academic Integrity

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin–Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary sanctions include, but are not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension or expulsion.

Common examples of academic misconduct include:

- Collaborating on or discussing an assessment or exam with anyone other than the instructor
- Copying someone else's code – even with modifications
- Copying someone else's solution or text
- Submitting an assignment as your own work when a part or all of the assignment is the work of another person
- Submitting an assignment that contains ideas or research of others without appropriately identifying the sources of those ideas
- Posting course content online, or submitting it to another party for posting online

Consequently:

1. Students may not submit their own previously submitted work from another without the permission of the course's principal instructor and with proper citation.
2. Students may not share their work with another student regardless of the forum or means, unless authorized by the principal instructor.
3. Asking a classmate for their advice on how to solve activities and assignments is acceptable. However, all work you submit must represent your own individual effort. This means that you did not copy (or copy with modifications) someone else's code, and that you can explain all answers you submit.
4. You are not allowed to discuss any content of assessments and exams with anyone other than the instructional staff.
5. It is the responsibility of the student to understand all the details of the syllabus and UW-Madison policies. Lack of understanding regarding how to properly cite, the presence of specific course policies, and University expectations, does not excuse behavior.

Use of Artificial Intelligence (AI) Tools

The use of generative artificial intelligence (Microsoft Copilot, ChatGPT, Google Gemini, etc.) in this course should be avoided. If you decide to use it, use it as a supplemental resource, not to replace independent study and critical thinking. By using AI responsibly, you acknowledge the importance of maintaining high ethical standards and academic integrity.

Above all, remember that struggling is an essential part of learning! If you turn to AI at the first sign of difficulty, you may miss out on the deeper understanding that comes from working through a challenge. Please make a sincere effort to solve each question on your own for at least one hour before consulting an AI tool. True learning happens in the process of grappling with problems!

You cannot, under any circumstances, use AI during an assessment or the final exam!

Accommodations for Students with Disabilities

The University of Wisconsin–Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12) and UW–Madison policy (UW-855) require the university to provide reasonable accommodations to students with disabilities to access and participate in its academic programs and educational services. Faculty and students share responsibility in the accommodation process. Students are expected to inform faculty of their need for instructional accommodations during the beginning of the semester, or as soon as possible after being approved for accommodations. Faculty will work either directly with the student or in coordination with the McBurney Disability Resource Center to provide reasonable instructional and course-related accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

Engineering for All

We cultivate and uphold a safe, welcoming, and supportive environment for all, operating with the highest standards of integrity, collegiality, and ethics and recognizing the contributions of every member of our college community. Our faculty integrate innovative, multidisciplinary research into the classroom, leveraging evidence-based teaching methods to inspire and prepare our students. Through our research, teaching and service, we pursue answers to societal needs and challenges.

Academic Calendar and Religious Observances

View the full academic calendar in addition to information about religious and election day observances. Students are responsible for notifying instructors within the first two weeks of classes about any need for flexibility due to religious observances. Establishment of the academic calendar for the University of Wisconsin–Madison falls within the authority of the faculty as set forth in Faculty Policies and Procedures. Construction of the academic calendar is subject to various rules and laws prescribed by the Board of Regents, the Faculty Senate, State of Wisconsin and the federal government. Find additional dates and deadlines for students on the Office of the Registrar website.

Mental Health and Well-Being

As a student you may experience a range of issues that can cause barriers to learning. These might include strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, or loss of motivation. University Health Services can help with these or other issues you may experience. Help is always available. You can learn about free, confidential mental health services available to you; call 608-265-6600 (option 2) or visit uhs.wisc.edu. College of Engineering students can also directly access short-term mental health support from the engineering embedded mental health provider. Visit the Engineering Wellness page for more information.

Privacy of Student Records & Use of Audio Recorded Lectures

Lecture materials and recordings for this course are protected intellectual property at UW–Madison. Students enrolled in this course may use the materials and recordings for their personal use related to participation in the course. Students may also take notes solely for their personal use. If a lecture is not already recorded, students are not authorized to record lectures without permission unless they are considered by the university to be a qualified student with a disability who has an approved accommodation that includes recording. [Regent Policy

Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities, with the exception of sharing copies of personal notes as a notetaker through the McBurney Disability Resource Center. Students are otherwise prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct. View more information about FERPA.

Teaching & Learning Data Transparency

The privacy and security of faculty, staff and students' personal information is a top priority for UW–Madison. The university carefully reviews and vets all campus-supported digital tools used for teaching and learning, including those that support data empowered educational practices and proctoring. View more information about teaching and learning data transparency at UW–Madison.

Course Evaluations

Students at the University of Wisconsin–Madison have the opportunity to evaluate their learning experiences and the courses they are enrolled in through course evaluations. Many instructors use a digital course evaluation tool to collect feedback from students. Student participation is an integral component of course development, and confidential feedback is important. UW–Madison strongly encourages student participation in course evaluations.

Students' Rules, Rights & Responsibilities

View more information about student rules, rights and responsibilities such as student privacy rights, sharing of academic record information, academic integrity and grievances. Additional College of Engineering information can be found at: <https://engineering.wisc.edu/report-an-incident/academic-grievances-and-complaints/>