

ECE 440 – Spring 2019

Transmission of information

MWF 9:30-10:20am in EE226

1. Staff:

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Office hours: TBD
Lab TA: Stephen Larew (email: sglarew at purdue)

2. Class materials:

- Textbook: **Principles of Communication**, 7th edition, Ziemer and Tranter, John Wiley & Sons, Inc.(also available as an e-book).
- Another good reference: **Communication Systems Engineering**, John G. Proakis and Masoud Salehi.
- Example worked problems: Schaums **Analog and Digital Communications**, 2nd Edition, Hwei Hsu, McGraw-Hill.
- Homework, grades, and other materials will be made available through Blackboard.

3. Laboratory

- The laboratory is EE 165. Section 003 is scheduled Thursday and Section 004 Friday, both from 11:30a to 2:20p.
- You must do the labs during your assigned period each week. Because you receive one hour of lab credit, you will fail the course unless you attend the lab and attempt to perform the experiments.
- You are expected to attend the lab on the first week of classes.
- All the information and documents for the lab are on <https://engineering.purdue.edu/ECEIL/ECE44000/>.

4. Homework

- There will be roughly three homeworks per month. Homework assignments will be posted on Blackboard and distributed in class.
- Solutions to the homework assignments will also be posted on Blackboard shortly after the submission deadline, so late homework will **not** be accepted. However, the lowest homework score will not count towards your final grade. This will allow a small buffer for late registration, illness, or hectic times of the semester.
- You are encouraged to discuss the homework with your classmates, TAs, or myself, but you are expected to independently find your own solution. Copying the solution from a shared set of notes will be considered cheating.

5. Tests/Final Exam

- There will be two in-class one-hour midterms and one final exam.
- If you have a scheduling conflict with any examination you should discuss this with your instructor **at least one week** ahead of time. No makeup exams will be given, but an oral examination may be given instead. An absence without permission will result in a zero for the missed exam.
- If you have three exams in one calendar day during Final Exams Week, you are allowed to reschedule one of them. Again, you should discuss this with your instructor **at least 2 weeks** ahead of time.
- A request to regrade a test must be filed with your professor **within one week** after the test results have been posted.
- If you have a disability or other needs, please see the Disability Resource Center (DRC) for possible accommodations. The web location is <http://www.purdue.edu/odos/drc/>.

6. Grading

- Your final class grade will be determined based on the following point allocation:

Laboratory	25%
Homework	15%
Midterms (15% each)	30%
Final Exam	30%

The total score will be mapped to letter grades as follows: ≥ 80 : A, 70-80: B, 60-70: C, 50-60: D, ≤ 50 : F. However, grades will be curved if needed so that at least 10% of the class gets grades in the A range, and no more than 20% gets F.

- In addition to the grading scheme outlined above, each student must demonstrate a minimum level of competency in each of the Course Outcomes, as defined in our ABET accreditation standards.
- Regrade requests on any graded exercise must be submitted in writing within one week of the date when the material was returned to you. When you return your paper for a regrade, please attach a dated sheet to the front, indicating where you think that your paper was graded incorrectly.

7. Course Outcomes A student who successfully fulfills the course requirements will have demonstrated:

- (a) An ability to recognize and analyze in the time and frequency domain the performance of amplitude and frequency modulated analog communications systems in the presence of noise.
- (b) An ability to understand the importance, computation, and measurement using modern test equipment of standard performance measures of analog systems, which include bandwidth and signal to noise ratio.
- (c) An ability to recognize and analyze in the time and frequency domains the performance of various digital modulation formats, including ASK, QAM, PSK, and FSK in the presence of noise.
- (d) An ability to understand the importance, computation, and measurement using modern test equipment of standard performance measures of digital systems which include bandwidth and bit error probability.

- (e) An understanding of the basics of information theory and error control codes including the effect of error control codes on the bandwidth and bit error probability of digital systems.

8. **Electronic mass mail:**

A mass email list has been established so I can communicate with you easily. Important announcements and other information will be distributed through this email.

9. **Academic Honesty Policy**

Cheating on homework or exams results in a zero score for the assignment or exam, or a failing grade for the course, at the discretion of the instructor. All cases will also be referred to the Office of the Dean of Students. If there is any question as to whether a given action might be construed as cheating, please see the instructor or TA before you engage in this action.

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

Purdue's 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.**

10. **Mental Health:**

If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try WellTrack, <https://purdue.welltrack.com/>. 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 see the Office of the Dean of Students, <http://www.purdue.edu/odos>, for drop-in hours (M-F, 8 am- 5 pm).

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 and <http://www.purdue.edu/caps/> 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.

11. **Campus Emergencies**

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. Here are ways to get information about changes in this course: Blackboard Vista web page, my email address: bpeleato@purdue.edu, and my office phone: 496-3717.

See the emergency preparedness slide on Blackboard for details on how to respond to an emergency during class.