

EE432 Course Policy Statement

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- Introduction:** Welcome to EE432, Digital Signal Processing (DSP). In this course, DSP principles are studied and applied to one-dimensional data such as voice, music, and biomedical signals. Analog-to-digital and digital-to-analog conversion are studied in detail. The interrelationships between a system's difference equation, frequency response, and transfer function are explored. The Discrete Time Fourier Transform and Discrete Fourier Transform are introduced, their properties are explored, and the Fast Fourier Transform algorithm is developed. Properties of Finite and Infinite Impulse Response digital filters are studied. Digital filters are designed and applied to random and deterministic signals. See the course website <http://www.usna.edu/EE/ee432/> for a detailed syllabus. This document outlines policies for the course.
- Schedule:** Section 1121: MWF1, R12 (RI008)
- Office Hours:** M2 and W7 for drop-ins; other times MWRF by email appointment.
- Reading:** The course textbook is *Fundamentals of Digital Signal Processing* by Van de Vegte. All reading assignments should be completed prior to the class for which they are assigned and will be fair game for testing (whether or not explicitly covered in lecture).
- Homework:** Problem sets will be assigned most weeks and will be collected at the beginning of class on Mondays. Completing them is critical to understanding the concepts and succeeding in EE432. After having first attempted to work the problems on your own, you are encouraged to seek help from classmates and the professor. Whether you work alone or in groups, the work you submit must be your own.
- Homework assignments must be neat, worked in pencil on 8.5 x 11" paper, and clearly labeled with your name and section number at the top of each page. Staple multiple sheets together. Show all steps and units, and box your answers.
- Homework will be graded solely on effort and clarity, using a check/check-minus/zero system. You must neatly show all of your work and attempt each assigned problem in order to receive full credit (check). Homework not meeting this standard will receive half-credit (check minus); and homework turned in late or not at all will receive a grade of zero. Leaving some homework problems completely blank (or with nothing more written than a restatement of the question) will typically earn a check minus. If your degree of uncertainty about the material is such that you simply do not know where to begin a problem, this is a sign that you should seek EI!
- To account for extenuating circumstances that might arise during the semester, students will be permitted to turn in a single homework assignment up to three days late without penalty.
- Projects:** Projects will be assigned throughout the term and are a very important component of the course. Most projects will be worked individually, though designated assignments may be worked in pairs. Project assignments should be read and printed, have any pre-calculations completed, and be brought to class on the days they appear on the syllabus; there may not be opportunities to print them in class. Specific guidelines regarding what to include in submitted reports will appear at the end of each assignment. Most projects make heavy use of MATLAB. For full credit, all submitted code must be well-documented, including having intelligible variable names, line-by-line comments where appropriate, and header (i.e. MATLAB "help") comments describing the purpose and usage of functions. Late projects will receive a deduction of 25% for each week or part thereof they are late.
- To account for extenuating circumstances that might arise during the semester, students will be permitted to turn in a single project assignment up to three days late without penalty.

Quizzes: Closed book quizzes will be given periodically throughout the term. Problems will be derived from the previous two weeks' reading and homework. A quiz grade will have twice the weight of a weekly homework grade.

Exams: Three exams will be given during lab periods, or possibly as take-home exams. They may include problem(s) to be solved using MATLAB in addition to handwritten questions. Exams must be completed individually and in the required time period; take-home exams submitted late or not at all will receive a grade of zero. The exams are open book and open notes, but neither the Internet nor any individual may be consulted.

Final Project: A final project involving presentation of your results to the class will be given in place of a final exam. More details about the final project will be given later in the semester.

Missing Class: If you are going to miss class due to a *non-emergency* (see the Commandant's Table of Priorities), any homework and projects due during your absence must be turned in before the absence in order to receive credit. If you will miss an exam, you must notify the professor at least two weeks in advance to arrange a makeup. Note that athletic trips, ECA trips, and elective surgery (PRK) are some fairly common non-emergencies. Makeup quizzes are not given; those missed due to an invalid absence receive a grade of zero; those missed due to a valid absence have no effect on the grade.

Sleeping on the Job: Don't. Stand in the back of the room if necessary. Police your peers.

Food and Drink: Food is not allowed in class per USNA policy; drinks with caps/lids are permitted in the desk area of the classroom only; neither food nor drink is permitted in the laboratory workbench area.

Technology: Calculators and spare batteries are required for every class. Per ECE Department policy, only calculators that have been approved for the Fundamentals of Engineering Exam (FE) are permitted. A list of FE-approved calculators, which run in price as low as \$15, can be found at: http://www.ncees.org/Exams/Exam-day_policies/Calculator_policy.php. Cellphones/smartphones and alarms are to be turned off while in class. Personal laptops are not permitted. Computers in the classroom are for official and course-related use only. Do not change settings/configurations or install software on an in-class computer without permission from the professor. Back up your work regularly to removable media; the hard drives of in-class computers will be reformatted about once per month.

Plagiarism: Submitting another person's work as your own is an honor violation. If you receive substantial help from someone on an assignment, give him/her written credit. Such citations will not impact grades. Using old solutions for homework or projects (available from e.g. previous students or the Internet) is prohibited. Exams and quizzes are to be done by you only, with no assistance from any source other than possibly your notes and textbook, if permitted by the exam instructions.

Section Leader: To be appointed the first day of class along with an Assistant Section Leader who will assume his/her duties in case of absence. The duties of the Section Leader are: 1) to call the section to attention at the start and end of every class; 2) to complete attendance at the start of class; and 3) to call the ECE office at 3-6150 in the unlikely event the professor is late by more than 10 minutes, and lead a full-period study session if the instructor is confirmed to be absent.

Grade Breakdown:

	6-week	12-week	16-week	Final
Exam 1	45%	25%	20%	20%
Exam 2	---	25%	20%	20%
Exam 3	---	---	20%	20%
HW/Quiz	15%	15%	15%	10%
Projects	40%	35%	25%	20%
Final Project	---	---	---	10%

As a reminder, the professor reserves the right to adjust your final grade based upon your overall performance.