University of Nebraska-Lincoln
ECEN 463/863: Digital Signal Processing
Fall, 2025

Syllabus

Teaching Staff

Instructor: Maxx Seminario

Office hours: Mondays 2:30 – 3:30 PM, in SEC C215, or by appointment.
e-mail: mseminario2@huskers.unl.edu

Teaching Assistant: TBD

Office hours: TBD,
e-mail: TBD

Class Meetings

- Mondays, Wednesdays, and Fridays 1:30 – 2:20 PM at NH W183
- If in-person classes are canceled due to inclement weather, you will be notified of the instructional continuity plan for this class via Canvas

Pre-Requisite

- ECEN 304 (Signals and Systems) or permission of the instructor

ECEN 463/863 Course Description

The successful student will exhibit competence in a wide variety of topics pertaining to Digital Signal Processing (DSP), including:

- Sampling of continuous signals
- Discrete transform theory (including Z-transform, Discrete Time Fourier Transform, and Discrete Fourier Transform)
- Digital filter use and design via matlab software
- Time/Frequency, polyphase and other representations of discrete-time signals
- Signal processing implementation and simulation in Matlab

Class website

The class website https://canvas.unl.edu contains

- Lecture notes, homework assignments, and Matlab code.
- Homework submission will be online on Canvas.

Evaluation Basis

Homework: 40% - 70%
Exams: 30% - 60% (Depending on 1 or 2 Exams)

Homework policy

- Most problem sets will be assigned on Friday and will be due the following Friday by 11:59 PM.
- Assignments should be submitted online on Canvas. Submit a single .pdf file with your solutions.
- Homework solutions will typically be available shortly after the homework due date. Homework grades will typically be available within a week of the due date.
- Discussion among students is encouraged, but individual solutions must be submitted
- In general, late homeworks will not be accepted. Under extenuating circumstances, extensions must be approved by the instructor or TA, and arranged prior to the deadline.

MATALB Exercises

Computer exercises will be given on a regular basis (including Dead Week). These computer simulations provide extremely valuable learning opportunities. You will be required to program these assignments yourselves.

In-Class Quizzes

Periodic quizzes may be given. Usually we will use these to encourage student participation in assigned reading. This will allow us to cover course material more thoroughly and efficiently.

Exams

One or two exams will be given during the semester. Make-up exams will be oral.

Personal Responsibility

Class attendance and participation is strongly encouraged. Late materials are not accepted unless previously approved.

Academic Integrity

As is always the case, you will be responsible for your own work in this class. Misrepresenting someone else's work as your own (that is, without clear attribution of source) is considered cheating. Cheating will result in a course grade of F.

Students with Disabilities

The Office of Civil Rights requires the following ADA language to be included in all syllabi (as per Dr. Horn, UNL ADA Compliance Officer, 2007):

"Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY."