INSTRUCTOR: Prof Hamid Nawab

ASSIGNED CLASSROOM: PHO 202

MAJOR LECTURES: Mondays 10:10AM-11:55AM Live on Zoom for all EC716 students. These lectures are also recorded for later review by students.

MINOR LECTURES: Recorded lectures (45 minutes each) for all EC716 students to be viewed on weekends as part of assigned homework.

IN-PERSON PROJECT DISCUSSIONS: Wednesdays 10:10AM-11AM in PHO 202 (You may attend this OR the Remote Discussion described next but not both).

REMOTE PROJECT DISCUSSIONS: Wednesdays 11:05AM-11:55AM Live on Zoom (You may attend this OR the In-Person Discussion described above but not both). There will be no recording of these discussions.

COURSE OBJECTIVE: The main objective of this course is for students to study and experience advanced design, implementation, debugging, and testing in digital signal processing as viewed through the lens of various application contexts.

COURSE LEARNING OUTCOMES:
Upon successful completion of this course you should be able to:
   1) Conduct DSP Literature searches in given application contexts
   2) Formulate DSP requirements/specifications to meet the needs of a given application
   3) Design DSP algorithms to meet DSP requirements/specifications.
   4) Implement DSP algorithms in software.
   5) Debug implemented DSP algorithms for desired DSP functionality.
   6) Test implemented DSP algorithms for desired application functionality

APPLICATION CONTEXTS:
   1) Audio or Image Compression
   2) Audio or Image Restoration
   3) Audio beamforming or Video Compression

In EC716 this term, you are required to propose, conduct, and report a project in each of the 3 application contexts. The 2-page Proposals for each of the three projects are due by midnight on March 25. The 5-page Reports for each of the three projects are due by midnight on April 28.

GRADING:
Your course grade will depend 50% on the quality of your 3 Proposals and 50% on the quality of your 3 Reports. Grading rubrics will be provided for each proposal and report as the term progresses. Historically, most students receive an A or A- in EC716.