



University Bulletin

Undergraduate Degree Programs

Electrical Engineering (E E)

E E 008S Introduction to Digital Music (1) First-year seminar that discusses digital music from an electrical engineering perspective; topics include sampling, digital filtering, compression, and music synthesis.

**E E 008S Introduction to Digital Music (1)
(FYS)**

E E 008S is a lab-oriented first-year seminar course aimed at students interested in the field of digital music. Specifically, this course discusses how the various digital music formats (and other types of digital audio) relate to the electrical engineering sub-discipline of digital signal processing. Students will come out of this course with a more technical understanding of the digital audio formats that they listen to every day.

This course is structured to have alternating periods of lecture and lab. New concepts are first covered in the lectures and then reinforced with a variety of laboratory activities. In the laboratory experiments, students will use various computer programs and will also get exposure to standard test equipment used by electrical engineers.

Topics covered in the lectures/labs include investigating the physics of sound, sampling and quantization of music signals, generating audio special effects through the use of digital filters, compression techniques used in digital audio, and mathematically synthesizing instrument sounds. Current popular digital audio formats such as compact disc audio, WAV, MP3, and MIDI will also be investigated throughout this course.

No musical experience/talent is necessary.

General Education: None
Diversity: None
Bachelor of Arts: None
Effective: Fall 2001

Note : Class size, frequency of offering, and evaluation methods will vary by location and instructor. For these details check the specific course syllabus.

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