**Engineering Systems Analysis: Signals**

**Course Description**

Linear system theory offers a powerful set of mathematical tools used broadly across science and engineering. Continuous-time and discrete-time signals represent the transfer of information or power, while systems represent operations on these signals. This course extends material from the first half-semester of Engineering Systems Analysis to focus on fundamental concepts such as frequency response, convolution, modulation, transforms (CTFT, DTFT, and Z-transform), impulse and step response, sampling and aliasing. These concepts are presented within the framework of linear operators and transforms in discrete and continuous time. Applications include filters, system identification, and communications.

Signals is taught in a studio setting, i.e., during class, students work on “In-class Assignments”, aka Day Assignments, while the instructor moves from table group to table group, answering questions, checking conceptual understanding, and assisting students individually or in groups.

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Description automatically generated**Course Schedule, Spring 2024**