



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Mixed Signal Verification and CAD Tools

ECE 7821

Credit Hours:

3.00 - 3.00

Course Levels:

Graduate (5000-8000 level)

Course Components:

Lecture

Course Description:

Principles of combining analog, RF, and digital design, simulation, and verification strategies using modern CAD tools.

Prerequisites and Co-requisites:

Prereq: 5020, 622, or 720.

Course Goals / Objectives:

- Develop capabilities in verifying mixed signal system design using CAD tools
 - Study mixed signal designs such as signal processing combined with data converters
 - Develop a design report that demonstrates verification of a mixed signal system design
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Course Topics:

- Mixed-signal descriptions in Matlab, Spice, and hardware description languages
 - Analog hardware description languages
 - VLSI system architectures in communication, signal processing, and control
 - Top-down design with bottom-up verification flows
 - Mixed-signal testbenches - analog/RF verification combined with digital verification
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Designation:

Elective