



**THE OHIO STATE UNIVERSITY**  
COLLEGE OF ENGINEERING

# Electromagnetic Interference and Compatibility

## ECE 7811

**Credit Hours:**

3.00 - 3.00

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**Course Levels:**

Graduate (5000-8000 level)

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**Course Components:**

Lecture

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**Course Description:**

Electromagnetic interference and compatibility, signal integrity in ICs, conducted emissions and electromagnetic radiation susceptibility, and crosstalk and shielding.

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**Prerequisites and Co-requisites:**

Prereq: 6010 (719).

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**Course Goals / Objectives:**

- Learn the EMC requirements for Electronic Systems
  - Learn the non-ideal behaviors of components
  - Learn the conducted and radiated emissions and susceptibility
  - Learn how to use commercial tools to analyze signal integrity for ICs
  - Learn how to generate eye diagrams for studying SI, crosstalk, and jitter in ICs
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**Course Topics:**

- EMC requirements for electronic systems
  - Non-ideal behaviors of components
  - Conducted and radiated emissions and susceptibility
  - Crosstalk and shielding
  - Using tools for signal integrity analysis
  - Study eye diagrams for communication systems
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**Designation:**

Elective