CE 3101 Intro

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These slides introduce Dr. Johnson and CE 3101

CE 3101 Intro

- CE 3101 – Digital Electronics and Computer Interfacing

Course Description

Digital electronics are diode and transistor circuits that operate on digital signals. This course introduces the design and analysis of diode circuits, BJT circuits, and MOSFET circuits with a focus on digital logic families. It also examines electronic circuits commonly used to interface sensors or actuators to the computer. Interfacing topics include analog-to-digital signal conditioning using operational amplifiers, digital-to-analog conversion using standard solid-state components, and large-signal biasing of BJT and MOSFET drivers. (prereq: EE 2050)

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- ## CE 3101 – Digital Electronics and Computer Interfacing

Course Learning Outcomes

Upon successful completion of this course, the student will be able to:

- Analyze and design circuits using first, second, and third approximation diode models
- Analyze and design BJT logic circuits
- Analyze and design NMOS and CMOS logic circuits
- Describe, use, and mix the standard 7400, 74LS00, 74HC00, and CD4000 logic families
- Design, simulate, and test signal conditioning circuits and filters used to interface analog sensors to a computer
- Design simulate, and test interface circuits for small and large DC loads

Dr. Johnson
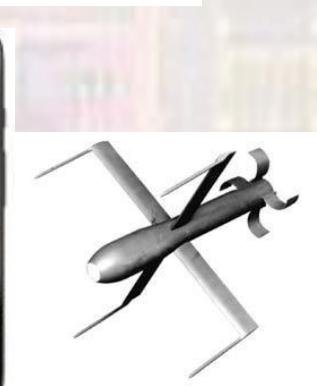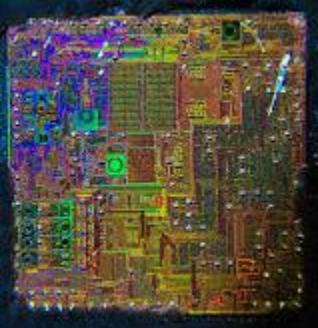
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- Dr. Johnson's Website
  - https://faculty-web.msoe.edu/johnsontimoj/index.html

  - Search johnson and MSOE in your browser

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- CE 3101 Website
  - https://faculty-web.msoe.edu/johnsontimoj/CE3101/index-ce3101.html

  - Link in upper right-hand corner of Dr. Johnson's website

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- Syllabus
  - https://faculty-web.msoe.edu/johnsontimoj/CE3101/files3101/syllabus.pdf

- Class Notes
  - https://faculty-web.msoe.edu/johnsontimoj/CE3101/index-ce3101-schedule.html

- HW
  - https://faculty-web.msoe.edu/johnsontimoj/CE3101/index-ce3101-hw.html

- Labs
  - https://faculty-web.msoe.edu/johnsontimoj/CE3101/index-ce3101-lab.html