

# **ECE2883 Course Syllabus**

## **ECE2883**

### **ECE 2283 HPC (2-3-3)**

#### **Prerequisites**

None

#### **Corequisites**

None

#### **Catalog Description**

The second offering of an Honors Program course that provides a creative experience for Honors students and also provides a direct course substitution for ECE2031.

#### **Textbook(s)**

No Textbook Specified.

#### **Topical Outline**

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- CAD Tools
- Combinational and sequential logic design capture using both sche
- HDL-based simulation and synthesis with FPGAs
- Examination of real timing issues on hardware using timing simula
- State machine specification, design, and simulation
- Design verification with logic analyzer
- HDL models of data storage elements
- ROM and RAM implementations on FPGA boards
- Hardware design of a simple computer with ALU, registers, control
- Design project problem specification
- Hardware and tools available to solve the design project problem