

## **El E 385: Advanced Digital Systems** **Electrical and Computer Engineering**

Advanced Digital Systems: RTL hardware design using VHDL; coding, simulation, synthesis, and implementation of digital system in FPGA; combinational and sequential building blocks; timing analysis; trade-offs in design metrics; overview of transistor-level design; arithmetic circuits; number system; memory arrays; logic arrays; temporal and spatial parallelism.

3 Credits

### **Prerequisites**

- [El E 235: Principles of Digital Systems](#) (Minimum grade: C-)
- Pre-Requisite: 24 Earned Hours

### **Corequisites**

- [El E 386: Advanced Digital Systems Laboratory](#)

### **Instruction Type(s)**

- Lecture: Lecture for El E 385

### **Subject Areas**

- [Computer Engineering, General](#)
- [Electrical and Electronics Engineering](#)

