

## CSCE 210 - Computer Hardware Foundations

- **Credit Hours:** 3 hours
- **Contact Hours:** 3 lecture hours
- **Instructor:** Dr. Matt Thatcher
- **Required Textbooks:** *The Architecture of Computer Hardware, Systems Software, & Networking: An Information Technology Approach*, 5th Edition, by Irv Englander (January 2014), Wiley (ISBN: 978-1-118-32263-5) (Paperback)
- **Bulletin Description:** Number representation, data formats, CPU and memory organization, assembly language, I/O and peripherals, computer networks.
- **Prerequisite:** CSCE 145, 204, 205, 206, or 207
- **Required Course** in CIS
- **Course Outcomes:** Students will be able to:
  1. Describe the major storage formats for data,
  2. Represent integers, floating point numbers, and character data,
  3. Describe the major components of a computer system and state their functions and purpose,
  4. Demonstrate the ability to program in assembly language,
  5. Explain the fundamental concepts and implementation options for input and output.
- **Student Outcomes addressed by course**

Program	Student Outcomes Addressed
Computer Engineering	N/A
Computer Information Systems	1, 2
Computer Science	N/A

### Topics covered

1. Number representation (6 hours)
2. Data representation (9 hours)
3. Computer organization (12 hours)
4. Assembly language (3 hours)
5. I/O and peripherals (9 hours)
6. Memory hierarchy (3 hours)