CSCE 210 - Computer Hardware Foundations

- **Credit Hours:** 3 hours
- **Contact Hours:** 3 lecture hours
- **Instructor:** Dr. Matt Thatcher
- **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**

<table>
<thead>
<tr>
<th>Program</th>
<th>Student Outcomes Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Engineering</td>
<td>N/A</td>
</tr>
<tr>
<td>Computer Information Systems</td>
<td>1, 2</td>
</tr>
<tr>
<td>Computer Science</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**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)