CSCE 212 - Introduction to Computer Architecture

- **Credit Hours:** 3 hours
- **Contact Hours:** 3 lecture hours
- **Instructor:** Dr. Jason Bakos, Dr. Song Wang
- **Bulletin Description:** Computer architecture, components, and organization; memory addressing; Input/Output; instruction sets; interrupts; assembly-language programming.
- **Prerequisites:** CSCE 211 and either 145 or 206
- **Required Course in CE and CS**
- **Course Outcomes:** Students will be able to:
  1. Describe the microstructure of a processor.
  2. Describe how conventional machine instructions operate in conjunction with the components of a computer.
  3. Demonstrate the ability to program a microprocessor in assembly language.
  4. Evaluate the performance of computers.

- **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>1, 2</td>
</tr>
<tr>
<td>Computer Information Systems</td>
<td>N/A</td>
</tr>
<tr>
<td>Computer Science</td>
<td>1, 2</td>
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</tbody>
</table>

**Topics covered**
1. General Overview of Computer Architecture
2. MIPS Instruction Set Architecture- Assembly Language Paradigm
3. Floating Point Algorithms
4. Performance
5. Processor Design
6. Memory Hierarchy