CSCE 212 - Introduction to Computer Architecture
Credit Hours: 3 hours
Contact Hours: 3 lecture hours
Instructor: Dr. Jason Bakos


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 programs

Learning 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. Classify and describe the operation of parallel computer architectures.
- 5. Evaluate the performance of computers.

Student (Program) Outcomes addressed by course (Detailed mappings of these course outcomes to the Student Outcomes of the programs are in the detailed syllabus and the Assessment plan.)

<table>
<thead>
<tr>
<th>Student Program Outcomes</th>
<th>SOs supported</th>
<th>SOs Moderately supported</th>
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<tbody>
<tr>
<td>Computer Engineering</td>
<td>a, c, e, k</td>
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<tr>
<td>Computer Information Systems</td>
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<tr>
<td>Computer Science</td>
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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
- 7. Multicore and multiprocessor architectures