

Course Title	COMPUTER ARCHITECTURE
Course Code	CSC 219
Course Purpose and Objectives	Through this course, students will gain knowledge in regard to the architecture and the organization of a computer. Students will be able to get an understanding of the numerical representation of data and perform mathematical operations similar to this that are performed by a computer. They will get a deeper look inside the components of a computer such as its central processing unit and its memories (cache, associative and virtual) and explore the way they operate. They will be able to classify the various types of programming language and at the same time, they will have the opportunity to use an assembly language (low-level language) such as MIPS for performing basic tasks and get hands-on experience.
Learning Outcomes	<ol style="list-style-type: none"> 1. Simulate micro-operations using binary and alparithmetic numbers 2. Classify memory types and describe how they are organized and how they operate. 3. Describe the operation of a CPU 4. Compare RISC and CISC architectures 5. Classify parallel computer architectures 6. Criticise parallel processing and pipelining 7. Implement programs using MIPS assembly language
Course Content	<ul style="list-style-type: none"> • Data Representation and Microoperations • Computer Technology • Memory and its Organization • Assembly Languages • Central Processing Unit • Pipelining • Laboratory Work