

Module One Introduction and Learning Objectives

Welcome to Computer Architecture & Design Overview Module!

In this module, we will have an overview of computer architecture to show you a big picture of the history, current challenges, and future trends of computers. We will also review the use of Verilog to ensure the success of your future assignments.

Learning Objectives

1. Understand the different perspectives of computer architecture. Learn its history, current challenges, and future trends.
2. Learn the common metrics used to evaluate computer systems and their calculation methods.
3. Review the use of the Vivado design suite with the design and verification of a simple system.

How to Achieve the Objectives

You can achieve this module's learning objective by accomplishing the following:

Readings

1. Chapter 1 of the textbook: [COD_Chapter1.pdf](https://sjsu.instructure.com/courses/1491749/files/69324254?wrap=1)
(<https://sjsu.instructure.com/courses/1491749/files/69324254?wrap=1>)
2. How to write a report: [Report_Requirements.pdf](https://sjsu.instructure.com/courses/1491749/files/69324255?wrap=1)
(<https://sjsu.instructure.com/courses/1491749/files/69324255?wrap=1>)
3. How to draw a schematic diagram: [Schematics_Drawing_Guidelines.png](https://sjsu.instructure.com/courses/1491749/files/69324280?wrap=1)
(<https://sjsu.instructure.com/courses/1491749/files/69324280?wrap=1>)
4. Verilog manual: [verilog-ieee.pdf](https://sjsu.instructure.com/courses/1491749/files/69324265?wrap=1) (<https://sjsu.instructure.com/courses/1491749/files/69324265?wrap=1>)

Lectures

Check the module for the latest lecture slides.

Assignments

[Assignment 1 \(https://sjsu.instructure.com/courses/1491749/assignments/6335740\)](https://sjsu.instructure.com/courses/1491749/assignments/6335740)

Discussion group: For assignments, we are going to employ a discussion group approach. You are required to find a partner to form a discussion group and discuss your design before implementing the system. 2-student teams have been created for you in the people tool. Later on, you can also use this team directly for your team assignments. You must implement the system by yourself. However, you can discuss with your partner the tools, graphs, and ideas that you will use in your implementation. Please include the name of your partner in your report. Also, include a section about your key takeaways from the discussion and how it affects your work.

Discussions

Module discussion: **[Module One General Discussion \(https://sjsu.instructure.com/courses/1491749/discussion_topics/4728251\)](https://sjsu.instructure.com/courses/1491749/discussion_topics/4728251)**

How You Will Demonstrate Your Achievement of the Learning Objectives

1. Assignment.
2. Quiz.