WAYLAND BAPTIST UNIVERSITY

ONLINE CAMPUS

SCHOOL OF MATHEMATICS AND SCIENCES

## Wayland Mission Statement:

Wayland Baptist University exists to educate students in an academically challenging, learning-focused, and distinctively Christian environment for professional success and service to God and humankind.

## Course Title and Number:

CSCI 2350-SPRING1ST8WKS; Computer Organization and Design

## Term:

Spring 1 2023

## Name of Instructor:

Mr. Michael Wade Ashby

## Office Phone Number and WBU Email Address:

Michael.Ashby@wayland.wbu.edu

## Office Hours, Building, and Location:

Office hours will be virtual by appointment which can be set up by email. Through email we will determine the best platform for both of us to use to conduct the meeting.

## Class Meeting Time and Location:

Class will be completed in Blackboard.

## Catalog Description:

Introduction to the organization and design of single-processor computer systems and assembly language. Topics include basic concepts of computer architecture and organization, assembly programming, I/O devices, interrupts, and memory hierarchy.

## Prerequisites:

CSCI 1312

## Required Textbook and Resources:

CSCI 2350: Computer Organization and Design; 2022, zyBooks. ISBN: 979-8-203-06782-1.

**Optional Materials:**

* A whiteboard to help draw out and think through problems
* A flash drive or cloud storage to back up files

## Course Outcome Competencies:

* Analyze, develop and implement an algorithm to solve mathematical and scientific problems.
* Know data representations; and will be able to interpret data in different format and convert numbers between different number systems.
* Demonstrate the understanding of basic processor architecture design and Instruction Execution Cycles. Students will be able to explain the roles of high-level language, assembly language, machine language, operating system.
* Demonstrate how to use control structures, such as jmp, loop, to control the flow of a program in assembly language.
* Write assembly language programming using structured programming technique, as well as learning how to use assembler.
* Use shifting, rotating and logic operations and bit manipulations operations.

## Attendance Requirements:

All students are expected to attend all class sessions and are responsible for knowing the material covered.  No quizzes or exams can be made up unless arrangements prior to the absence have been made.  Any student missing more than 25% of the class will fail the class.

## Statement on Plagiarism and Academic Dishonesty:

Wayland Baptist University observes a zero-tolerance policy regarding academic dishonesty. Per university policy as described in the academic catalog, all cases of academic dishonesty will be reported, and second offenses will result in suspension from the university.

## Disability Statement:

In compliance with the Americans with Disabilities Act of 1990 (ADA), it is the policy of Wayland Baptist University that no otherwise qualified person with a disability be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the university. The Coordinator of Counseling Services serves as the coordinator of students with a disability and should be contacted concerning accommodation requests at (806) 291-3765. Documentation of a disability must accompany any request for accommodations.

## Course Requirements and Grading Criteria:

**Homework and Labs:** The homework will be periodic assignments given such as discussion board participation, questions from the book, or similar. The labs are coding projects that will be given and submitted.

**Quizzes:** A quiz will be given weekly to assess a student’s comprehension of the material to that point. The quiz will be timed to ensure that students are familiar with the text prior to attempting the quiz.

**Exams:** There will two exams, a midterm and final. Each count as 25% of the overall grade.

**Grade Weights:**

30% Homework and Labs

30% Quizzes

20% Midterm Exam

20% Final Exam

**A: 90 – 100 B:  80 – 89 C:  70 – 79 D:  60 – 69 F: Below 60**

Students shall have protection through orderly procedures against prejudices or capricious academic evaluation. A student who believes that he or she has not been held to realistic academic standards, just evaluation procedures, or appropriate grading, may appeal the final grade given in the course by using the student grade appeal process described in the Academic Catalog. Appeals may not be made for advanced placement examinations or course bypass examinations. Appeals are limited to the final course grade, which may be upheld, raised, or lowered at any stage of the appeal process. Any recommendation to lower a course grade must be submitted through the Executive Vice President/Provost to the Faculty Assembly Grade Appeals Committee for review and approval. The Faculty Assembly Grade Appeals Committee may instruct that the course grade be upheld, raised, or lowered to a more proper evaluation.

## Tentative Schedule:

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| --- | --- | --- |
| **Week #** | **Dates** | **Material Covered** |
| 1 | 1/16/23 – 1/22/23 | Chapter 1: Information as Bits |
| 2 | 1/23/23 – 1/29/23 | Chapter 2: MIPS Assembly, Part 1 |
| 3 | 1/30/23 – 2/5/23 | Chapter 3: MIPS Assembly, Part 2 |
| 4 | 2/6/23 – 2/12/23 | Chapter 4: C to Assembly & Midterm |
| 5 | 2/13/23 – 2/19/23 | Chapter 5: MIPSzy Processor Design |
| 6 | 2/20/23 – 2/26/23 | Chapter 6: Memory |
| 7 | 2/27/23 – 3/5/23 | Chapter 7: Input/Output |
| 8 | 3/6/23 – 3/11/23 | Final Exam |

## Academic Honesty:

Disciplinary action for academic misconduct is the responsibility of the faculty member assigned to this course. The faculty member is charged with assessing the gravity of any case of academic dishonesty, and with giving sanctions to any student involved.

Important Dates:

Last day to drop without record – Jan. 23rd, 2023

Last day to withdraw with “W” – Feb. 17th, 2023

Last day to withdraw with a “WP/WF” – March 3rd, 2023

Last Class – March 11th, 2023

This syllabus is only a plan.  The teacher may modify the plan during the course.  The requirements and grading criteria may be changed during the course if necessary.