# Assembly Language Programming

**For Microcomputers**

# CISP 310

**Course Syllabus**

### Professor Suha Al juboori, PhD Credit: 4 Units Spring 21 Semester Accepted for Credit: UC, CSU

***Welcome***

Welcome to Assembly Language Programming course. This is an introductory course to computer architecture using assembly language programs. Topics include binary representation of data and instructions, memory addressing modes, subroutines and macros,operating system interrupts, processor architecture, and interfacing with high level languages.

### Class Meeting

There will be no live class meeting, however there will be weekly recorded lectures with all additional resources you that you will need posted through canvas. The only live meetings will be through Zoom during office hours or by appointment.

### Learning Outcomes and Objectives

Upon completion of this course, the student will be able to:

* Recognize the computer architecture issues needed to write assembly language code
* Compare and contrast the binary representation of data and assembly language instructions
* Create assembly language programs that accept input, perform calculations, and make decisions based on the input, and display an answer
* Explain the roles of software in the creation, building, and debugging of executable files using assembly language
* Formulate and implement algorithms to solve complex problems using assembly language

### Prerequisite(s)

CISP 360 with a grade of "C" or better

### Textbook & Supplies

#### Required Textbook:

**INTRODUCTION TO 80X86 ASSEMBLY LANGUAGE AND COMPUTER ARCHITECTURE**, 3RD EDITION, BY RICHARD C. DETMER, 2014. ISBN-13: 978-1284036121

#### Required Supplies:

You will need access to a computer that runs Windows 7 or later. You will be installing Visual Studio to complete your programming assignments. If you are using Mac, specific instruction will be posted to help you in your installation.

***Office Hours***

My online office hours through Zoom for this Semester are:

|  |  |
| --- | --- |
| **Day** | **Hours** |
| Monday | 1:00 PM – 1:50 PM |
| Tuesday | By Appointment |
| Wednesday | 1:00 PM - 1:50 PM |
| Thursday | By Appointment |

All meeting links will be posted in Canvas 🡪 Announcements

## Email

Best way to reach me through my email

[**AljuboS@flc.losrios.edu**](mailto:AljuboS@flc.losrios.edu)

Please contact me with any questions or concerns. I will generally respond within 24 hours except for weekends where it may take longer.

## Student Responsibilities

### Activate your Gmail

You need to activate your [Los Rios Gmail](https://apps.losrios.edu/idp/profile/SAML2/Redirect/SSO?execution=e4s1)

### Understand (or learn!) how to use Canvas

The new eLearning course management software in Los Rios is Canvas. Please visit the eLearning web page ( [https://canvas.losrios.edu](https://canvas.losrios.edu/)) and confirm that you can log on to the system.

* **Course content will be available to *enrolled students only* on or shortly after the start date of classes**.
* On the log on page for Canvas read through the syllabus and other course specific information that you will find there.
* Canvas is on the Los Rios eLearning network and does not require individual installation by students.
* To learn more about Canvas, please visit [Canvas Guides](https://community.canvaslms.com/community/answers/guides/overview)

### Submit Work on Time

All assignments have due dates, try to submit all the required work on-time.

### Ask Questions

Do not hesitate to attend online office hours or schedule a one-on-one appointment with me to solve any issue you may have in class

### Announcement

Announcement will be posted regularly on Canvas, they will provide you with details and remainders about the course.

***Course Structure* =**

### Assignments

* For this course there are multiple hands-on assignments.
* You turn your answers online through Canvas. Assignments must have the following format:
  + Assignments must be formatted using a word processing program (such as MS Word).
  + Include your name, the course number, and the assignment number in the beginning of the first page.
  + Problems must be in the correct order.
  + **You need to include output with your programming assignment**
  + No fancy fonts. Use Arial or Calibri or Courier, or a similar simple, common font.

#### Assignments not meeting these requirements will not be accepted.

* Each Assignment is worth 40 points
* Multiple submissions are accepted and last submission will be graded unless you specify another version
* There are due dates. You may always work ahead but try not to fall behind!!
* Assignments are due on the date specified ***Late assignments will be accepted within a week from the due date with a 50% penalty.***

### Exams

* There will be two midterm exams and one final exam. Exams will be based on the material presented in lectures, and assignments. Multiple submissions will not be accepted for exams If you have a good reason, you can arrange to take a test before the rest of the class if and only if you contact me before the test date. **Missed tests cannot be made up**

## Course Topics

* Computer Architecture
* x86 Instruction Set
* Non-Decimal Bases
* Branching & Looping
* Procedures
* Bit Manipulation

#### The instructor reserves the right to change the syllabus at any time for any reason.

***Grades***

Points will be accumulated based on the following sources:

|  |  |
| --- | --- |
| **Part** | **Points** |
| Assignments | 400 |
| Midterm Exam 1 | 200 |
| Midterm Exam 2 | 200 |
| Final Exam | 200 |
| Total | 1000 |



Grade is based on overall percentage earned. The professor reserves the right to adjust the final letter grade based on overall performance and how close you are to the cut-off.

A = 90 - 100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 59% or less

A request for a grade of I (Incomplete) will not be granted under any

circumstances.

***Academic Honesty***

Any student caught cheating (which includes copying another person's program) will receive a failing grade.

### Students with Disabilities

Disabled Student Programs & Services (DSP&S) provides equal educational opportunity for students with physical, psychological, or learning disabilities. Counseling, support services, and academic accommodations are provided to students eligible to the program. For more information call 530-642- 5630 or 916-608-6611, or speak to your instructor.

### Other Student Services

There are other programs on campus to assist you in achieving success. Science Center (FL2-234) is a hub for many different programs and activities. Many past students have found the tutoring service to be very helpful, and it’s free! You may also be interested in study groups. Please let me know if you need assistance finding the right one for you. For all student services, if you have any difficulty finding help, let me know and I will do my best to point you in the right direction.

***I look forward to getting to know you this semester as we learn together!***