CS 3304 Computer Organization and Programming
Spring 2022 Syllabus

Textbook: Kip Irvine, Assembly Language for x86 Processors (e-book, print-on-demand), 8th Ed., Pearson, 2020. $59.99.
Print ISBN: 9780135381656, 0135381657,
eText ISBN: 9780135381793, 0135381797.

General Course Information

Instructor: Lopamudra Roychoudhuri
E-mail: lroychoudhuri@angelo.edu
Office: MCS 205E
Campus Phone: (325) 486-5448
Class Times: Section 010: TR 11:00-12:15 pm, Section 020: TR 12:30-1:45 pm
Classroom: MCS 114 for both sections
Course Web Site: Blackboard
Office Hours: MTWRF 3:00-5:00 pm on Blackboard Collaborate.

Prerequisites:

CS 1337 (C or better).

Precautionary Measures against COVID-19

Please refer to this [Health and Safety web page](#)[i] for updated information about campus guidelines as they relate to the COVID-19 pandemic.
Please continue to follow good hygiene practices and personal health monitoring. Should you suspect you have COVID-19, are experiencing symptoms, or know you have been exposed to the virus, you need to use the Daily Wellness Screening to report your condition. A link for the form is also available on RamPort, the ASU Mobile app, and ASU website.

Course Objectives:

This course provides basic computer organization with emphasis on machine representation of data and instructions. Students will study programming in assembly and machine-oriented languages. Students will solve problems and design solutions using assembly language for Intel x86 processor family.

Student Learning Goals:

Students who successfully complete this course will have demonstrated the ability to:
1. Understand the principles of computer architecture as applied to the Intel x86 processor family,
2. Understand data representation, including signed and unsigned integers, real numbers, and character data,
3. Apply the concepts of basic Boolean logic to computer hardware and programming,
4. Be familiar with the syntax and constructs of assembly language,

5. Create, compile, link and run assembly language programs using the Microsoft Visual Studio Integrated Development Environment,
6. Construct programs using the following: sequence, selection, and repetition,
7. Use procedures and arrays,
8. Solve problems and create solutions using assembly language.

Grading:

Grading Criteria	Dates	Weights	Goals Assessed
Assignments	Daily/Weekly/biweekly	50%	1 thru 8
Exam 1	2/8/22	15%	1, 2
Exam 2	4/12/22	15%	1 thru 5
Final Exam	5/10/22-5/12/22	20%	1 thru 8

GRADE	PERCENT
A	90 – 100
B	80 – 89
C	70 – 79
D	60 - 69
F	0 - 59

Week by week tentative schedule:

Wk	Date	Topics
1	1/18, 1/20	Basic Concepts (Ch. 1)
2	1/25, 1/27	Basic Concepts (Ch. 1) cont.; x86 Processor Architecture (Ch. 2)
3	2/1, 2/3	x86 Processor Architecture (Ch. 2) cont.;
4	2/8, 2/10	**Exam 1 on 2/8;** Assembly Language fundamentals (Ch. 3)
5	2/15, 2/17	Assembly Language fundamentals (Ch. 3) cont.
6	2/22, 2/24	Data Transfers, Addressing and Arithmetic (Ch. 4)
7	3/1, 3/3	Data Transfers, Addressing and Arithmetic (Ch. 4) cont.;
8	3/8, 3/10	Procedures (Ch. 5)
	3/14 - 3/18	**Spring Break**
9	3/22, 3/24	Procedures (Ch. 5) cont.
10	3/29, 3/31	Conditional Processing (Ch. 6)
11	4/5, 4/7	Conditional Processing (Ch. 6) cont.
12	4/12, 4/14	**Exam 2 on 4/12**; Integer Arithmetic (Ch. 7)
13	4/19, 4/21	Integer Arithmetic (Ch. 7) cont.
14	4/26, 4/28	Advanced Procedures (Ch. 8)
15	5/3, 5/5	Advanced Procedures (Ch. 8) cont.
16	5/10, 5/12	**Final Exams** Section 010: Tuesday 5/10/22 10:30 am -12:30 pm Section 020: Thursday 5/12/22 10:30 am -12:30 pm

CLASS STRUCTURE AND ASSIGNMENTS:

- **Flipped Classroom:** Videos and readings from the textbook and/or other sources will be announced prior to every class session. You will complete reading and watching these videos *before* class. We will work on many kinds of assignments in class based on this material.

- **Quizzes:** We will work on quizzes that will validate the reading and videos. The grade from the quizzes will constitute 20% of the total Assignment grade.

- **Assignments:** these fall in two categories:

  In-class Assignments: We will discuss topics in class and work on assignments. You will be able to collaborate with your fellow students in order to complete these. Assignments that cannot be completed in class will be taken out-of-class and turned in. The grade from these assignments will constitute 30% of the total Assignment grade.

  Homework Assignments: the purpose of the homework assignments is to give you individual out-of-class practice on the topics that you are learning, and to explore some ideas more deeply. The grade from the homework assignments will constitute 50% of the total Assignment grade.

- *All assignments, unless otherwise specified, must be submitted to Blackboard containing your name, course name, the title of the assignment and the due date.*

- *No late assignment will be accepted. No e-mail or in-person submission is accepted.* There are no exceptions to this rule.

- All homework assignments should be the work product of each individual. Cheating occurs when a student either submits work for a grade that is not entirely due to his/her own effort or allows others to use her/his work. Cheating occurs when a student submits work product that is copied from another student. Cheating on an assignment or exam will result in a failing grade for the course. No student shall look towards the work of any other student during exams as it shall be construed as cheating.

- **Academic Honor Code:** Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. The College of Science and Engineering adheres to the university's [Statement of Academic Integrity.](ii) [ii] (can be found in page 96 of the [Student Handbook](iii)[iii]). You should familiarize yourself with it. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

EXAMS

We will have three exams. All students must take exams at scheduled dates and times. There are no makeup exams. Only exception will be student absence for observance of religious holy day (see below). If one exam is missed, the final exam will count double to make up for the missed exam. Only one missed exam can be made up this way. If more than one exam is missed, a grade of zero will be given for the additional missed exam. *The final exam must be taken on its assigned date and time.* For students taking all three exams, the final exam grade can replace a lower grade on one of the exams if the final exam grade is higher.
Exams will be held in MCS 114 classroom on Respondus Lockdown Browser.

ATTENDANCE
Attendance is mandatory *(no excused absences)* and roll will be taken.

GRADEBOOKS

During the course of the semester, you are expected to monitor your performance on assignments and exams by accessing your grades online. It is your responsibility to: (1) ensure that correct entries have been made into the gradebook, and (2) be aware of your performance in the class. Grade percentages are shown on this syllabus so you can compute your own grade standing as the semester progresses.

E-MAIL

You are required to obtain an e-mail account. If you have any question about the course or need assistance, please contact me in person or by telephone during office hours, or by e-mail at any time.

LAB POLICY

No food or drinks are allowed in the lab.

General Policy Statements

Add/Drop Dates

Students may add this course up to January 21, 2022.
Students may drop this class or withdraw from the university until April 28, 2022.

Academic Accommodations for Students with Disabilities:

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website.[iv] The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from

completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures[v] for more information.

Student Absence for Observance of Religious Holy Day

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day[vi] for more information.

Title IX at Angelo State University

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance. Students are encouraged to report any incidents of sexual misconduct directly to ASU's Office of Title IX Compliance at:

Michelle Miller, J.D.
Special Assistant to the President and Title IX Coordinator
Mayer Administration Building, Room 210
325-486-6357
michelle.miller@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345. For more information about Title IX in general you may visit www.angelo.edu/title-ix[vii].

Modifications to the syllabus

The instructor and the university reserve the right to modify or change the syllabus (schedule, course requirements, grading policy, etc.) as the curriculum and/or program require(s).

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[i] https://www.angelo.edu/covid-19/returning-to-campus/health-and-safety.php

[ii] https://www.angelo.edu/live/files/27603-student-handbook-2020-21

[iii] https://www.angelo.edu/current-students/student-handbook/

[iv] https://www.angelo.edu/current-students/disability-services/

[v] https://www.angelo.edu/live/files/14197-op-1011-grading-procedures

[vi] https://www.angelo.edu/live/files/14206-op-1019-student-absence-for-observance-of

[vii] www.angelo.edu/title-ix