You can rent this book from amazon.com rental for $40. Amazon eTextbook is $113. E-Book rental for 180 days from vitalsource is $38.

General Course Information

Instructor: Lopamudra Roychoudhuri
E-mail: lroychoudhuri@angelo.edu
Office: MCS 205E
Campus Phone: (325) 486-5448
Class Times: TR. Section 010: 9:30-10:45am, Section 020: 11:00-12:15 pm, Section 030: 12:30-1:45 pm.
Classroom: Section 010: MCS 111A, Sections 020 and 030: MCS 115
Course Web Site: Blackboard
Office Hours: MTWRF 3:00-5:00pm

Prerequisites:
CS 1337 (C or better).

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 one or more of the following: sequence, selection, and repetition,
7. Use procedures and arrays,
8. Solve problems and create solutions using assembly language.

### Grading:

<table>
<thead>
<tr>
<th>Grading Criteria</th>
<th>Dates</th>
<th>Weights</th>
<th>Goals Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>Daily/Weekly/biweekly</td>
<td>40%</td>
<td>1 thru 8</td>
</tr>
<tr>
<td>Exam 1</td>
<td>2/7/17</td>
<td>10%</td>
<td>1, 2</td>
</tr>
<tr>
<td>Exam 2</td>
<td>3/28/17</td>
<td>15%</td>
<td>1 thru 5</td>
</tr>
<tr>
<td>Exam 3</td>
<td>4/25/17</td>
<td>15%</td>
<td>1 thru 7</td>
</tr>
<tr>
<td>Final Exam</td>
<td>5/11/17</td>
<td>20%</td>
<td>1 thru 8</td>
</tr>
</tbody>
</table>

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

### Week by week tentative schedule:

<table>
<thead>
<tr>
<th>Wk</th>
<th>Date</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/16, 1/18</td>
<td>Basic Concepts (Ch. 1)</td>
</tr>
<tr>
<td>2</td>
<td>1/23, 1/25</td>
<td>Basic Concepts (Ch. 1) cont.; x86 Processor Architecture (Ch. 2)</td>
</tr>
<tr>
<td>3</td>
<td>1/30, 2/1</td>
<td>x86 Processor Architecture (Ch. 2) cont.;</td>
</tr>
<tr>
<td>4</td>
<td>2/6, 2/8</td>
<td><strong>Exam 1 on 2/6;</strong> Assembly Language fundamentals (Ch. 3)</td>
</tr>
<tr>
<td>5</td>
<td>2/13, 2/15</td>
<td>Assembly Language fundamentals (Ch. 3) cont.</td>
</tr>
<tr>
<td>6</td>
<td>2/20, 2/22</td>
<td>Data Transfers, Addressing and Arithmetic (Ch. 4)</td>
</tr>
<tr>
<td>7</td>
<td>2/27, 3/1</td>
<td>Data Transfers, Addressing and Arithmetic (Ch. 4) cont.;</td>
</tr>
<tr>
<td>8</td>
<td>3/6, 3/8</td>
<td>Procedures (Ch. 5)</td>
</tr>
<tr>
<td></td>
<td>3/12 - 3/16</td>
<td>Spring Break</td>
</tr>
<tr>
<td>9</td>
<td>3/20, 3/22</td>
<td>Procedures (Ch. 5) cont.</td>
</tr>
<tr>
<td>10</td>
<td>3/27, 3/29</td>
<td><strong>Exam 2 on 3/27;</strong> Conditional Processing (Ch. 6)</td>
</tr>
<tr>
<td>11</td>
<td>4/3, 4/5</td>
<td>Conditional Processing (Ch. 6) cont.</td>
</tr>
<tr>
<td>12</td>
<td>4/10, 4/12</td>
<td>Integer Arithmetic (Ch. 7)</td>
</tr>
<tr>
<td>13</td>
<td>4/17, 4/19</td>
<td>Integer Arithmetic (Ch. 7) cont.</td>
</tr>
<tr>
<td>14</td>
<td>4/24, 4/26</td>
<td><strong>Exam 3 on 4/24;</strong> Advanced Procedures (Ch. 8)</td>
</tr>
<tr>
<td>15</td>
<td>5/1, 5/3</td>
<td>Advanced Procedures (Ch. 8) cont.</td>
</tr>
</tbody>
</table>
| 16 | 5/8, 5/10  | **Final Exams**  
Section 010: Thursday 5/10/18 8:00 am -10:00 am  
Section 020: Tuesday 5/8/18 10:30 am -12:30 pm  
Section 030: Thursday 5/10/18 10:30 am -12:30 pm |
Class Policies:

TEAMS
You will form teams of 3 or 4. The teams will be chosen on the first day of class, and will be maintained till the end of semester.

ASSIGNMENTS
• There will be many kinds of assignments that you will complete in and out of class.

• In-class assignments: these fall in two categories:
  • Class work Assignments: We will discuss topics in class and work on assignments. You will be able to collaborate with your fellow students or team members in order to complete these. Assignments that could not 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.
  • In-class quizzes: We will also have in-class quizzes that may be team-based or individual. The grade from the quizzes will constitute 20% of the total Assignment grade.

• Out-of-class assignments: these fall in two categories:
  • Graded 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.
  • Videos and/or readings – You will complete watching videos and/or some reading from the textbook or other sources prior to every class session. These will be announced beforehand. This is to ensure that you are familiar with the topics that will be discussed in the class, and may be validated by in-class quizzes.

• 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. Students are responsible for
understanding the Academic Honor Code, which is available on the web at Academic Honor Code in Student Handbook. You should familiarize yourself with it. If a student violates this policy in any way, the student may receive a sanction of failure on the assignment/exam or failure in the course. If you have questions about appropriate citations, please ask.

EXAMS
All exams will be comprehensive. All students must take all the exams at the scheduled 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 exams. The final exam must be taken on its assigned date and time. For students taking all four exams, the final exam grade will replace a lower grade on one of the first three exams if the final exam grade is higher. Only one regular exam grade can be replaced in this way.

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

Academic Accommodations:
Persons with disabilities that may warrant academic accommodations must contact the Student Life Office, Room 112, University Center, in order to request such accommodations prior to any accommodations being implemented. You are encouraged to make this request early in the semester so that appropriate arrangements can be made.
Student Absence for Observance of Religious Holy Day

1. “Religious holy day” means a holy day observed by a religion whose places of worship are exempt from property taxation under Texas Tax Code §11.20.
2. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.
3. A student who is excused under section 2 may not be penalized for the absence; however, the instructor may respond appropriately if the student fails to complete the assignment satisfactorily.

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).

1. https://www.amazon.com/Assembly-Language-x86-Processors-7th/dp/0133769402/ref=sr_1_1?ie=UTF8&qid=1515625955&sr=8-1&keywords=kip+irvine+assembly+language+for+x86+processors
2. https://www.amazon.com/Assembly-Language-x86-Processors-Irvine-ebook/dp/B001ZOD46K/ref=mt_kindle?_encoding=UTF8&me=