Course Description
This course introduces computer systems and computer programming using the concepts of algorithms for solving problems. It covers data representation and development, debugging, and verification of programs. We will use C++ as the programming language.

Course Goals
This is the first course in C++ programming. The goal of this course is to master the basics of computer programming using C++ language.

Learning Outcomes
When you complete this course, you should be able to:
1. Explain the basic syntax of C++ programming language,
2. Create, compile, link, and run a program using the Microsoft Visual Studio integrated development environment,
3. Construct a program using one or more of the following structures: sequence, selection, and repetition,
4. Demonstrate the use of functions and arrays,
5. Solve problems and create solutions using C++ language.

Required materials

- Available on the machines in the MCS computer labs.
- You can download it free of cost from imagine.microsoft.com. Details will follow when class starts.

Posted Material: You are required to study all the Powerpoint slides and view all lectures posted under Blackboard.
You must have an adequate computer and Internet connectivity in order to participate fully in the class. A table describing supported browsers can be viewed on Blackboard’s support site.
Prerequisites
None.

Technical skills required
No prior experience is expected, although it is assumed that you have used a computer, and you must be able to navigate the Web.

Time spent on this course
You can expect to spend a minimum of 6 hours per week to
- View lectures (videos, Powerpoint slides) posted under Blackboard,
- Read sections from the textbook and other sources, and
- Work on assignments.

Communication
Communication between you and I will be in-person, or via email, Skype or phone.
- **Email:** You are required to obtain an e-mail account. You will receive announcement emails from me and occasional direct emails that you are expected to respond promptly. You can email me any time. I shall reply within 24 hours. Please include ‘CS 1336-030’ in the subject line.
- **Skype:** My user name in Skype is lroychoudhuri. Please send me a contact request from your Skype, so that I have your user name. You will need to send me a Skype request, so that I know who you are. I shall be available on Skype during office hours.
- **If you have any question about the course or need assistance, please contact me by phone or Skype during office hours, or by e-mail at any time.**

Activities Assessing Learning Outcomes
There will be various activities that you will complete. These will be graded within five days of submission.

Teams
- You will form teams of 2 or 3. The teams will be chosen on the first day of class, and will be maintained till the end of semester. There will be various activities that you will complete individually or in teams.

Assignments
- **Weekly Quizzes**
  - You will complete viewing lectures (videos, Powerpoint slides) posted under Blackboard and the required reading from the textbook or other sources. This will be validated by quizzes that may be individual or team-based. The grade from the quizzes will constitute 10% of the total assignment grade.
- **Programming assignments**
  - The purpose of the programming assignments is to give you individual practice on the topics that you are learning, and to explore some ideas more deeply. Assignments will be given frequently (every 2 or 3 days) for you to complete. The grade from the programming assignments will constitute 90% of the total assignment grade.

Exams
- There will be three exams in online quiz format on Blackboard using Respondus Lockdown browser. All students must take all the exams on the scheduled dates. See table under Course Outline for dates and Class Policies for exam policies.
Grades
Your course grade will be based on the following:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
<th>Due</th>
<th>Outcomes Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming Assignments</td>
<td>45%</td>
<td>Daily/Weekly</td>
<td>1 thru 5</td>
</tr>
<tr>
<td>Quizzes</td>
<td>5%</td>
<td>Weekly</td>
<td>1 thru 5</td>
</tr>
<tr>
<td>Exam 1</td>
<td>15%</td>
<td>Week 5 (9/25)</td>
<td>1, 2</td>
</tr>
<tr>
<td>Exam 2</td>
<td>15%</td>
<td>Week 11 (11/6)</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
<td>Week 16 (12/11 10:30am - 12:30pm)</td>
<td>1 thru 5</td>
</tr>
</tbody>
</table>

Angelo State University employs a letter grade system. Grades in this course are determined on a percentage scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 - 100</td>
</tr>
<tr>
<td>B</td>
<td>80 - 89</td>
</tr>
<tr>
<td>C</td>
<td>70 - 79</td>
</tr>
<tr>
<td>D</td>
<td>60 - 69</td>
</tr>
<tr>
<td>F</td>
<td>0 - 59</td>
</tr>
</tbody>
</table>

Course Outline

**Week by week tentative schedule**

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Intro to computers and programming (Module 1)</td>
</tr>
<tr>
<td>2</td>
<td>Intro to C++ (Module 2)</td>
</tr>
<tr>
<td>3</td>
<td>Intro to C++ (Module 2) cont.</td>
</tr>
<tr>
<td>4</td>
<td>Intro to C++ (Module 2) cont.; Expressions and Interactivity (Module 3)</td>
</tr>
<tr>
<td>5</td>
<td><strong>Exam 1 on 9/25</strong>; Expressions and Interactivity (Module 3) cont.</td>
</tr>
<tr>
<td>6</td>
<td>Expressions and Interactivity (Module 3) cont.</td>
</tr>
<tr>
<td>7</td>
<td>Making Decisions (Module 4)</td>
</tr>
<tr>
<td>8</td>
<td>Making Decisions (Module 4) cont.</td>
</tr>
<tr>
<td>9</td>
<td>Loops and Files (Module 5)</td>
</tr>
<tr>
<td>10</td>
<td>Loops and Files (Module 5) cont.</td>
</tr>
<tr>
<td>11</td>
<td><strong>Exam 2 on 11/6</strong>; Loops and Files (Module 5) cont.</td>
</tr>
<tr>
<td>12</td>
<td>Functions (Module 6)</td>
</tr>
<tr>
<td>13</td>
<td>Functions (Module 6) cont.</td>
</tr>
<tr>
<td>14</td>
<td>Arrays (Module 7)</td>
</tr>
<tr>
<td>15</td>
<td>Arrays (Module 7) cont.</td>
</tr>
<tr>
<td>16</td>
<td><strong>Final Exam on Mon 12/11 (10:30 am - 12:30 pm)</strong></td>
</tr>
</tbody>
</table>

Class Policies

**Policy on absenteeism/non-communication**

- Attendance will be taken every day in the beginning of class. Your other participatory activities (such as viewing Blackboard lectures, responding to emails) will also be monitored. Failure to participate or communicate on your part will result in an appropriate reduction of your grade and possibly in your failure of this course.

**Late work**

- 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 submission is accepted.** There are no exceptions to this rule.

**Academic Integrity**

• 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 [http://www.angelo.edu/forms/pdf/honorcode5.pdf](http://www.angelo.edu/forms/pdf/honorcode5.pdf). 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.

**Exam Policies**

• There are no makeup exams. Only exception will be student absence for observance of religious holy day (see Additional Policies 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.** For students taking all three exams, the final exam grade can replace a lower grade on one of the first two exams if the final exam grade is higher. Only one regular exam grade can be replaced in this way.

**Classroom Etiquette**

Basic classroom etiquette includes:

• Turning off all cell phones so they do not ring or buzz disturbing the class,

• Arriving on time and not leaving early,

• Avoiding 'noisy' activities and any other behavior that interferes with the concentration and learning of other students.

**Email Etiquette**

• Apply this to all communication when using email. Please keep these universal netiquette policies in mind: (i) write complete sentences when sending an email message, (ii) do not use all CAPITAL LETTERS, (iii) check your spelling, (iv) be courteous, and never use offensive language, (v) sign your email message.

**Incompletes**

• The grade “I” is given when the student is unable to complete the course because of illness or personal misfortune. An "I" that is not removed before the end of the next long semester automatically becomes an "F". Students will be allowed one year to remove a grade of "I" before it automatically becomes an "F". To graduate from ASU, a student must complete all “I”’s.

**Add/Drop Dates**

• Students may add this course up to September 1, 2017.
Students may drop this class or withdraw from the university until November 3, 2017.

**Additional Policies**

**Accommodations for Disability**
The Student Life Office, located at room 112, University Center, is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is your responsibility to initiate such a request by contacting the Student Life Office at (325) 942-2191 or (325) 942-2126 (TDD/FAX) or by e-mail at Student.Life@angelo.edu to begin the process. The Student Life Office will establish the particular documentation requirements necessary for the various types of disabilities.

**Student absence for religious holidays**
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.

**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).