Course Description

The concepts and properties of algorithms for solving numerical and non-numerical problems. Introduction to computer and programming systems, including the development, debugging, and verification of programs, representation of data, computer characteristics and organization.

Goals

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

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

Course Delivery

This is a face-to-face course with learning resources and supplemental materials posted in Blackboard.
Required Materials


Online Subscription: Online zyLabs (a subscription is $30 and will last until Dec 24, 2021):
1. Click on your zyBooks link in your learning management system (Do not go to the zyBooks website and create a new account)
2. Subscribe

Software: Microsoft Visual Studio 2019
1. Microsoft Visual Studio 2019
   • Available on the machines in the MCS computer labs.
   • You can download Microsoft Visual Studio Community 2019 free of cost from Microsoft. Details will follow when class starts
2. Web browser for zyBooks
3. Respondus Lockdown Browser (download is available through Blackboard)
4. Webcam

Blackboard: You are required to study all the PowerPoint slides and view all lectures posted on Blackboard.

Technology: You must have access to an adequate computer or laptop (Chromebook is insufficient) with a webcam and Internet connectivity to participate fully in the class. ASU computer labs are available for your use. A table describing supported browsers can be viewed on the Blackboard support site.

COVID Related Requirements

Please refer to ASU’s COVID-19 (Coronavirus) Updates web page for current information about campus guidelines and safety standards as they relate to the COVID-19 pandemic.

Communication

You are responsible for checking your ASU email account and Blackboard frequently throughout the duration of this course. Email communication should be exclusively through your ASU email address. Please include your course name and section number in the subject line of your email.

Office Hours

Office hours will be held virtually through Blackboard Collaborate during the posted office hours. If you need a face-to-face meeting, please contact me via email to set up an appointment.
Activities Assessing Learning Outcomes

Assignments

- **Flipped Classroom:** Textbook material, videos, and PowerPoint slides will be announced on Blackboard. You are responsible for completing these tasks **before** class. This material will help you build the knowledge and skills needed to complete the quizzes and programming assignments.

- **Quizzes:** Quizzes and applicable due dates will be posted on Blackboard. Quizzes should be completed outside of class and may be retaken an unlimited number of times prior to the due date. A video explaining the answers will be posted after the quiz due date.

- **Programming assignments:** The purpose of the programming assignments is to give you individual programming practice on the topics that you are learning and to explore some ideas more deeply. Assignments will be given frequently for you to complete. Due dates will be posted on Blackboard and no late assignments will be accepted.

**Exams** There will be three exams including the final. Be prepared for an online format on Blackboard using Respondus Lockdown browser with Respondus Monitor turned on. Exams may include multiple choice, true/false, or fill-in-the-blank type questions or may require writing C++ code. All students must take all the exams on the scheduled dates. See table under Course Outline for approximate exam 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>
</tr>
</thead>
<tbody>
<tr>
<td>Programming Assignments</td>
<td>40%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>5%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>15%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

ASU 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>90.00-100.00</td>
</tr>
<tr>
<td>B</td>
<td>80.00-89.00</td>
</tr>
<tr>
<td>C</td>
<td>70.00-79.00</td>
</tr>
<tr>
<td>D</td>
<td>60.00-69.00</td>
</tr>
<tr>
<td>F</td>
<td>0-59.00</td>
</tr>
</tbody>
</table>
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 for more information.

Course Outline

Weekly 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); Exam 1</td>
</tr>
<tr>
<td>5</td>
<td>Expressions and Interactivity (Module 3) cont.</td>
</tr>
<tr>
<td>6</td>
<td>Expressions and Interactivity (Module 3) cont.; Making Decisions (Module 4)</td>
</tr>
<tr>
<td>7</td>
<td>Making Decisions (Module 4), Loops and Files (Module 5)</td>
</tr>
<tr>
<td>8</td>
<td>Loops and Files (Module 5) cont.; Exam 2</td>
</tr>
<tr>
<td>9</td>
<td>Loops and Files (Module 5) cont., Functions (Module 6)</td>
</tr>
<tr>
<td>10</td>
<td>Functions (Module 6) cont.</td>
</tr>
<tr>
<td>11</td>
<td>Functions (Module 6) cont., Arrays &amp; Vectors (Module 7)</td>
</tr>
<tr>
<td>12</td>
<td>Arrays &amp; Vectors (Module 7) cont.</td>
</tr>
<tr>
<td>13</td>
<td>Arrays &amp; Vectors (Module 7) cont.</td>
</tr>
<tr>
<td>14</td>
<td>Career Week</td>
</tr>
<tr>
<td>15</td>
<td>Programming Project</td>
</tr>
<tr>
<td>16</td>
<td>Final Exam on Wednesday, Dec 8, from 1:00 - 3:00 p.m.</td>
</tr>
</tbody>
</table>

Course Policies

All students are required to follow the policies and procedures presented in these documents:
- Angelo State University Student Handbook
- Grading Procedures

Policy on absenteeism/non-communication
- Attendance will be taken every day in the beginning of class. Quiz reviews and programming assignments will be given, so absenteeism will negatively impact your grade. 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.

Submissions/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.
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.

Student Disability Services

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 Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

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

Title IX Statement

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes
sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Miller, J.D.

You may submit reports in the following manner:

Michelle Nicole Boone, J.D.
- Director of Title IX Compliance/Title IX Coordinator
- 325-486-6357
- Michelle.boone@angelo.edu

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

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about Title IX in general you may visit www.angelo.edu/title-ix.

**Student Absence for Observance of Religious Holy Days**

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 for more information.

**Student Conduct Policies**

**Academic Integrity**

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university’s Statement of Academic Integrity.

All assignments should be the product of the student alone. 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 his/her work.

**Plagiarism**

Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing
it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality via Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center.

Copyright Policy

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

Modifications to the Syllabus

This syllabus, including grade evaluation and course schedule, is subject to modification on potentially short notice based on developing circumstances.