CS 1337: Computer Science II
Fall 2023
Course syllabus

Class meetings  section 010:  MWF 11:00–11:50  in MCS 111A&B

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office location: MCS 205I
office hours: online MTWRF 2:00–4:00 and by appointment


Description  Problem solving and program development techniques emphasizing modular design. Includes advanced programming topics such as class design, structures, strings, pointers and bit-manipulation in C++ using a UNIX environment.

Prerequisites  CS 1336 (Computer Science I) is a prerequisite for this course. Please see me if you haven’t taken it or if you’re unsure about your proficiency in C++ programming.

Grading breakdown  
60% assignments (mostly programming)
40% exams (probably four, including final)

Student learning outcomes  Students will

- become familiar with the internal storage of integral data.
- learn how to create, compile, link and run a program in a UNIX operating environment.
- learn how to create multi-file source programs.
- be introduced to bit-manipulation, including left- and right-shift operators and bitwise operators (not, and, or, exclusive or).
- be introduced to pointers.
- learn about character data, including its representation and available functions for testing and manipulating characters.
- be introduced to the string data type and various functions for manipulating strings.
- be introduced to structured data.
- be introduced to object-oriented programming using the class concept.
Class format

This face-to-face class meets in a computer lab. Unlike in CS 1336, we will be using the GNU C++ compiler in a UNIX environment. You will be given an account on the csunix.angelo.edu server and learn how to use it.

I will take attendance, and you will need to sit in the same place all semester. Class attendance is strongly encouraged. You have a duty to inform me as soon as you know that you’ll have to miss a class.

You will generally be asked to work individually on assignments. Discussion and giving and receiving help are generally encouraged when working on assignments, but all work you turn in must be your own; anything you turn in you must understand thoroughly and be prepared to explain in detail. Whenever you work with anyone but me (including tutors) in any way, you must write fully detailed comments in your code describing the help: who helped, how they helped on which part(s), etc. Failure to do so is considered taking credit for work not done and thus cheating. I will be glad to help you on assignments and concepts when you need it.

Exams must be completed entirely independently. There will likely be four exams: three midterms and one final.

Blackboard (angelo.blackboard.com) will be used to keep track of grades and assignments. You should check Blackboard and your ASU e-mail at least once a day to make sure you’re not missing anything. In particular, your ASU e-mail is the only reliable way I have of contacting you outside of class, so please don’t neglect it.

Safety

I encourage wearing a mask and keeping as much distance from others as is reasonably possible. Keep an eye on ASU’s public health updates at www.angelo.edu/public-health.

For safety reasons, I will hold office hours online using Blackboard Collaborate. Please take advantage of face-to-face class meetings to ask questions and get help, but when you need help outside of class just get in touch and I’ll do what I can to help.

Computer requirements

You may use PCs in the computer labs, but I recommend that you have your own Windows 10 or 11 computer ready to use when you can’t get to a lab. You may need to download and install free software, such as the Respondus LockDown Browser. It is your responsibility to have and to use a reliable Internet connection; for best results, use an Ethernet cable to connect to your Internet source instead of relying on Wi-Fi. You will need a microphone to use Blackboard Collaborate for virtual office hours.
## Semester schedule
This schedule of topics should be considered approximate and tentative.

<table>
<thead>
<tr>
<th>week of</th>
<th>topic</th>
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<tbody>
<tr>
<td>August 28th</td>
<td>number systems</td>
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<tr>
<td>September 6th</td>
<td>number systems</td>
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<tr>
<td>September 11th</td>
<td>internal numerical representation</td>
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<td>September 18th</td>
<td>internal numerical representation</td>
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<td>September 25th</td>
<td>bitwise operations</td>
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<td>October 2nd</td>
<td>bitwise operations</td>
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<td>October 9th</td>
<td>pointers</td>
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<td>October 16th</td>
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<td>October 23rd</td>
<td>strings</td>
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<td>October 30th</td>
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<td>November 6th</td>
<td>structures</td>
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<td>November 20th</td>
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<td>November 27th</td>
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<td>December 4th</td>
<td>classes</td>
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## Final exam
The final exam for this course is scheduled for Wednesday, December 13th, 10:30–12:30.

## Academic honesty
Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. By remaining enrolled in this course you agree not to commit academic misconduct as defined in section I.B.1 of the Student Handbook, available at [www.angelo.edu/student-handbook](http://www.angelo.edu/student-handbook).

## Important university policies
- You must contact Student Disability Services in order to request and to implement academic accommodations.
- For ASU’s policy on absences due to religious holy days, see OP 10.19 at [www.angelo.edu/opmanual](http://www.angelo.edu/opmanual).
- I am obligated to report any knowledge of sexual misconduct to the Title IX office; see [www.angelo.edu/services/title-ix](http://www.angelo.edu/services/title-ix) for more.

## Modifications
This syllabus, including grade evaluation and course schedule, is subject to modification. In particular, the COVID-19 pandemic may require significant changes in course delivery and content on potentially short notice.