Welcome to
CS 2308:
Foundations of Computer Science II

CS 2308 :: Spring 2016
Molly O’Neil
Instructor

• Ms. Molly O’Neil
  • Former Texas State grad student. Before that: microprocessor verification engineer (ARM), ECE/hardware design background

• Comal 207H / (512) 245-6670
• moneil@txstate.edu
• http://www.cs.txstate.edu/~mo1162/

• Office Hours:
  • Mondays: 3:30 PM - 5:30 PM
  • Wednesdays: 10:15 AM - 12:15 PM
  3:30 PM - 4:30 PM
  • Other mornings sometimes OK by prior appointment

• Grader: Kaleb Jacobsen, knj27@txstate.edu

Email is the best way to contact me
(...or whenever I’m in my office)
CS 2308

- **Description**: Searching and sorting. Pointers and dynamic memory allocation. Fundamentals of object-oriented programming. Introduction to abstract data types (ADTs) including lists, stacks, and queues.

- **Prerequisite**: C or higher in CS 1428

- **Objectives**:
  - An in-depth understanding of structured programming (modules and functions)
  - Algorithm development, fluency in comparing different algorithms for the same task (e.g., searching & sorting)
  - An in-depth understanding of pointers and memory operations
  - An introduction to classes and object-oriented programming
  - An introduction to linked lists (concept, implementation, and operations)
  - An introduction to data structures including stacks and queues
  - Testing and debugging code
  - Ability to program in the Linux environment
Textbook

• Tony Gaddis, *Starting out with C++ from Control Structures through Objects*, 8th Edition

• You can rent a digital copy for 180 days here:
  • [http://www.coursesmart.com/IR/6737414/9780133778779?_hdv=6.8](http://www.coursesmart.com/IR/6737414/9780133778779?_hdv=6.8)
## Grades

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes (unannounced)</td>
<td>5%</td>
<td>(lowest score of 6+ dropped)</td>
</tr>
<tr>
<td>Written Homework</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Programming Assignments</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Midterm Exam #1</td>
<td>20%</td>
<td>~ Wed. Feb. 24</td>
</tr>
<tr>
<td>Midterm Exam #2</td>
<td>20%</td>
<td>~ Wed. Apr. 13</td>
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<tr>
<td>Final Exam:</td>
<td>30%</td>
<td>Mon. May 9: 2 - 4:30 PM</td>
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</tbody>
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Grades assigned on a 90-80-70-60 scale; however, I reserve the right to *curve to the benefit of students*. 
Where to Find Stuff

- Lecture slides are on the course website:
  - [http://www.cs.txstate.edu/~mo1162/cs2308/](http://www.cs.txstate.edu/~mo1162/cs2308/)
  - Linked on the Schedule tab of the website, on the first day of each topic
  - Usually posted the evening before lecture

- Project handouts are also on the course website
  - Linked off the Schedule page and the Assignments page

- TRACS:
  - Homework handouts and solutions
  - Assignment submission
  - Grades (Gradebook2)
  - In-class code
Written Homework

• **5 written homeworks**, most ~1 week long

• Due in hard copy at start of lecture on due date
  
  • If you can’t make it to lecture, turn in to CS dept. office (Comal 211) time-stamped by front desk staff *before the start of lecture*, ask that it be put in my mailbox

• HW and projects will often be out at the same time
  
  • Never due on the same day
  
  • Homeworks are my way of incentivizing preparing for exams (e.g., no compiler, hand-written coding, short-answer)
    
    • Low grade point contribution

    • *Graded on completion (“good faith” attempt), not correctness!*
Programming Projects

- **7 coding assignments**, each ~2 weeks long
  - Project #1 broken into two parts
- Usually due **Wednesdays @ noon** so we can discuss solutions in lecture
- Submitted via Assignments tab in TRACS
  - Some projects may require hard-copy turn-in in lecture as well
- No late assignments accepted!! (10 minutes late == you receive a zero)
  - Multiple submissions OK
  - If you think you may come down to the wire, safety-submit a working partial implementation earlier in the day! Please note in header comments what works and what doesn’t.
- **Code that does not compile will not be graded!**
Style Guidelines

- Online @ http://www.cs.txstate.edu/~mo1162/cs2308/docs/StyleGuide.pdf (linked on Assignments tab of website)

- Summary:
  - Files and functions should have comment headers
  - ~80 character text line limit
  - Indent properly and use whitespace between sections
  - Name things descriptively! (Single-letter loop indices OK)
  - Only constants can be global variables
  - **No tabs allowed!!!** (Define 1 “tab” as 2-4 spaces)
  - Always be **CONSISTENT!**
Where to Do Assignments

• All 2308 assignments **must compile/run in Linux**
  • Learn Linux! It's a course objective — and also an investment in your job marketability
  • Can you develop assignments on your laptop/desktop anyway?
    • Sure, I can't stop you, but...
    • It is common for code to compile in one environment but NOT compile (or have different runtime behavior) on the department Linux servers! *Only way to know for sure is to develop on grading system.*

• DERR 231 (CS Dept. Linux Lab)

• Personal computers
  • Mac OS X
    • Built on top of Unix, Terminal access to compilation tools
  • Windows
    • Download ssh client and connect to CS dept. machines
Official Policies

• **Makeups**: Missed quizzes/assignments cannot be made up. Exams can sometimes be made up for documented emergencies and religious holy days.

• **Late Submission**: Late assignments will not be accepted. Extensions will only be granted for documented emergencies.

• **Re-grades**: Requests to re-grade work must be submitted *in writing* within one week.

• **Accommodation**: Any student with needs requiring special accommodations should inform the instructor during the first 2 weeks of class. The student should also contact the Office of Disability Services in the LBJ Student Center.

• **Academic Honesty**: Turning in an exam/assignment that is not entirely your own work is *never* OK. I will report Honor Code violations to University. *Group discussion and debugging help is NOT cheating and is ALWAYS OK!*
Classroom Policies

• Please silence cell phones

• I prefer you NOT have a laptop open in class
  • All code we work on in class will be posted to TRACS later
  • (This week is an exception...)

• OK to have food/drink (if no signs posted in classroom)
  • As long as you’re quiet and clean up after yourself

• Class discussion is strongly encouraged!
  • Be courteous (e.g., don’t interrupt one another, etc.)

• **Communicate!** I want to hear how things are going!