CSCI 1730 - C++ and Systems Programming

FALL 2015 – CRNS: 16625, 16632, 16636, 16641 – Conner Hall 104

Instructor: Michael E. Cotterell <mepcott@uga.edu> (Supa' Mike)

eLC: http://elc.uga.edu/
Piazza: https://piazza.com/uga/fall2015/csci1730cotterell/home

Lecture Times

Tuesday	Thursday
03:30 PM – 04:45 PM	03:30 PM – 04:45 PM
Conner Hall 104	Conner Hall 104

Breakout Sections (Wednesdays)

Section:	16625	16632	16636	16641
Time:	10:10 AM – 11:00 AM	11:15 AM – 12:05 PM	12:20 PM – 01:10 PM	01:25 PM – 02:15 PM
Place:	Boyd 201	Boyd 201	Boyd 201	Boyd 201
Lead:	Michael Cotterell mepcott@uga.edu	TBD	TBD	TBD

You may only attend the breakout section for which you are registered.

Instructor Information

- Instructor: Michael E. Cotterell <mepcott@uga.edu> (Supa' Mike)
- Office Hours: TTH 11:00 AM – 12:00 PM in Boyd 217

Teaching Assistants & Office Hours

TAs will be assigned to this course. Their office hours will be posted as soon as they are known.

Course Description

This four-hour course covers the basics of UNIX Systems Programming, including file and directory structures, basic and advanced file I/O, process creation, and interprocess communication. Throughout the semester, the language basics of C and C++ will be covered in order familiarize students with the use of C and C++ in systems programming.

Prerequisites & Co-requisites

CSCI 1301	Introduction to Computing and Programming (Prerequisite)
CSCI 1301L	CSCI 1301 Lab (Prerequisite)
CSCI 1302	Software Development (Required Co-requisite if you haven't already taken it)

Course Texts & Reference Material

Required Texts

[DD]	Deitel & Deitel. "C++ How to Program" (9th Ed.) (ISBN-13: 9780133378719)
[HOOVER]	Hoover. "System Programming with C and UNIX" (1st Ed.) (ISBN-13: 9780136067122)
[SINK]	Sink. "Version Control by Example" (1st Ed.) (ISBN-13: 978-0983507901) Available free at: http://ericsink.com/vcbe/

Recommended Texts

[SR]	Stevens & Rago. "Advanced Programming in the UNIX Environment" (3rd Ed.) (ISBN-13: 9780321637734) Reserve: 1st Ed. on reserve at the UGA Science Library (Call #: QA76.76 .O63 S754 1993)

Reference Materials

- Additional texts and notes may be suggested for reading throughout the semester. If your instructor posts something for you to read, you are expected to read it and to try to understand it, even if it's not part of an official assignment.

Grading Policy

Letter Grade Breakdown

Interval	Grade	Notes
$[94, \infty)$	A	
$[90, 94)$	A-	
$[87, 90)$	B+	
$[84, 87)$	B	
$[80, 84)$	B-	
$[77, 80)$	C+	
$[74, 77)$	C	
$[70, 75)$	C-	Not a C or better.
$[65, 70)$	D	Technically still passing.
$[0, 65)$	F	Failing.

Point Breakdown

Category	Percent	Notes
Breakouts	20%	
Projects	40%	
Midterm Exam	20%	2015-10-08
Final Exam	20%	2015-12-15 @ 3:30 PM

Piazza Discussion Board

This term we will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from classmates, the TA, and Supa' Mike. Rather than emailing general questions to the teaching staff, you are encouraged to post your questions on Piazza. Find our class page at: `https://piazza.com/uga/fall2015/csci1730cotterell/home`.

Programming Languages & Coding Assignments

Unless otherwise stated, you should implement your programming assignments in C++. You are free to use new language features available in C++ 11 and C++ 14, if needed. All submissions that involve code are expected to include a `README` file explaining how to compile and run the code in the submission. All submissions must compile and run on the departmental `nike` server.

The SSH hostname for `nike` is `nike.cs.uga.edu`. It is recommended that after you login to `nike`, you `ssh` into one of the twelve `cf` cluster nodes, `cf0`–`cf11`. Your password for the nodes in the `cf` cluster is the same as your `nike` password.

If have trouble logging into `nike`, please contact `support@cs.uga.edu` as soon as possible. Forgetting your username or password and waiting on System Support is **NOT** an excuse for late work.

Attendance Policy

Attendance for this course is based on a random sampling. Every once in a while, there will be unannounced, in-class exercises (so called Bull Quizzes) that are to be turned in. These will be used to compute your attendance and participation grade. There will be more than 5 Bull Quizzes, however, your overall score will be based on the best 5. This allows you to theoretically miss some days in which attendance is taken.

Late Work

Work that is turned in late is subject to a 20% deduction in the number of potential points for each 24 hour period (including weekends) that has passed since the time when the assignment was due. For example, if a project is worth 100 points and you turn it in late but less than 24 hours past the deadline, then the highest grade you can potentially earn is an 80/100.

Policy for Re-grades

You may request a re-grade of any graded item any time within 7 calendar days (i.e., not 7 class days) of receiving the grade. To make a request, you should submit a written justification for the request via email to your instructor.

Make-up Exams

Students may request to take an exam prior to the examination date. This request must be made at least one week prior to the scheduled examination date. Students who do not make such a request and are not in attendance on the examination date have an opportunity to take the exam at a different time only under exceptional circumstances, such as family or medical emergencies, and must have this absence approved by the instructor.

Make-up Quizzes

Students may request to make up a Bull Quiz or Pop Quiz only under exceptional circumstances, such as family or medical emergencies, and must have a way to verify their exception.

Student use of Technology in the Classroom

Access to the Internet can be a valuable aid to the classroom-learning environment. Unless otherwise noted, students are encouraged to use laptops, smart phones, and other devices in order to explore concepts related to course discussions and topics. Students are discouraged from using technology in ways that distract from the learning community (e.g. Facebook, texting, work for other classes, etc.) and if found doing so, will be asked to leave the classroom for the day and will not get credit for attendance that class period if attendance was taken.

Academic Honesty

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty,"and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: `http://www.uga.edu/honesty`. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

The Computer Science Department recognizes honesty and integrity as necessary to the academic function of the University. Therefore all students are reminded that the CS faculty requires compliance with the conduct regulations found in the University of Georgia Student Handbook. Academic honesty means that any work you submit is your own work.

Common forms of academic dishonesty, which students should guard against, are:

- copying from another student's test paper or laboratory report, or allowing another student to copy from you;
- fabricating data (computer, statistical) for an assignment;
- helping another student to write a laboratory report or computer software code that the student will present as his own work, or accepting such help and presenting the work as your own;
- turning in material from a public source such as a book or the Internet as your own work.

Three steps to help prevent academic dishonesty are:

- Familiarize yourself with the regulations.
- If you have any doubt about what constitutes academic dishonesty, ask your instructor or a staff member at the Office of the Vice President for Instruction.
- Refuse to assist students who want to cheat.

In addition to the terms expressed above, you also agree not to make any portion of your assignments for this class publicly available for others to view. This includes, but is not limited to, posting snippets of your code on help websites. Engaging in activities similar to this will be seen as either giving or receiving unauthorized assistance. With regard to question and answer websites (e.g., StackOverflow, Yahoo Answers, etc.), you may ask general questions about programming on such websites that relate to your assignments in this class, however, you must phrase such questions in a way that make them independent of the specific problem you are having.

If you need specific help with portions of your code, then you must consult with the instructor or teaching assistants first (unless expressly and explicitly stated otherwise in the assignment description). Furthermore, if you copy or extend material from the Web (in any fashion) or other sources and incorporate that material into the submission for one of your assignments then you must cite where you got the code from in order to avoid plagiarism.

All faculty, staff and students are encouraged to report all suspected cases of academic dishonesty. All cases of *suspected* academic dishonesty (cheating) will be referred to the Office of the Vice President for Instruction for academic dishonesty. Penalties imposed by the Office of the Vice President for Instruction may include a failing grade in the course and a notation on the student's transcript. Repeated violations are punishable by expulsion from the University.

Additional Information

Students with a disability or health-related issue who need a class accommodation should make an appointment to speak with the instructor as soon as possible.

When emailing the instructor or TA, please include a `[cs1730]` tag in the subject line. Note, we receive a lot of email, so it sometimes takes us a while to sort through our inboxes. Please allow 24-hours for a response on a weekday, and 48- hours for a response on the weekend or holiday/break.

Remember, the course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.