

Course Introduction

CSC 230 : C and Software Tools
NC State Department of Computer
Science

Teaching Staff

- Instructor: David Sturgill
 - Email: sturgill@csc.ncsu.edu
 - Office: EB2 2294
 - Office Hours:
 - Mo 1:00 – 3:00 pm
 - We 1:00 – 3:00 pm
- Section 001 Instructor: Suzanne Balik
- Teaching Assistants
 - Teaching Assistants soon
 - Office hours posted at:
[https://courses.ncsu.edu/csc230/common/
OfficeHours.html](https://courses.ncsu.edu/csc230/common/OfficeHours.html)

Electronic Resources

- Course Homepage
 - In Moodle
<http://wolfware.ncsu.edu>
 - Online support for:
 - Course organization
 - Slides and code examples
 - Exercises
 - Grades
 - Review materials
- Discussion group in Piazza
- Some submission via WolfWare Classic
- Project 2-6 submission via git

About Me

- Ph.D. from Cornell University
- 14 years at Baylor University
- Joined NCSU in Fall 2011
- Programming in C since 1986
- Outside this class
 - Senior Design, CSC 246
 - Programming team coach
 - Runner
 - Trombone player
 - Unicycle
 - I have a pet parrot
 - I own two banjos



What We Will Learn

- How to design with procedures
- What's going on closer to the hardware
- Supporting library code
- Tools and techniques for building and maintaining software.

Course Requirements

- Prerequisite : CSC 216 Programming Concepts in Java
 - Programming elements
(looping, branching, types, arrays, objects)
 - Basic ADTs and Data structures
(stacks, linked lists, resizable arrays)
 - Basic algorithms
(sorting, binary search)

Course Requirements

- What to Expect
 - Programming in a new, lower-level language
 - Related tools
 - In-class quizzes
 - Out-of-class Exercises
 - Larger programming projects
 - Preliminary exams
 - February 13
 - March 27
 - Final Exam, May 1

Grading

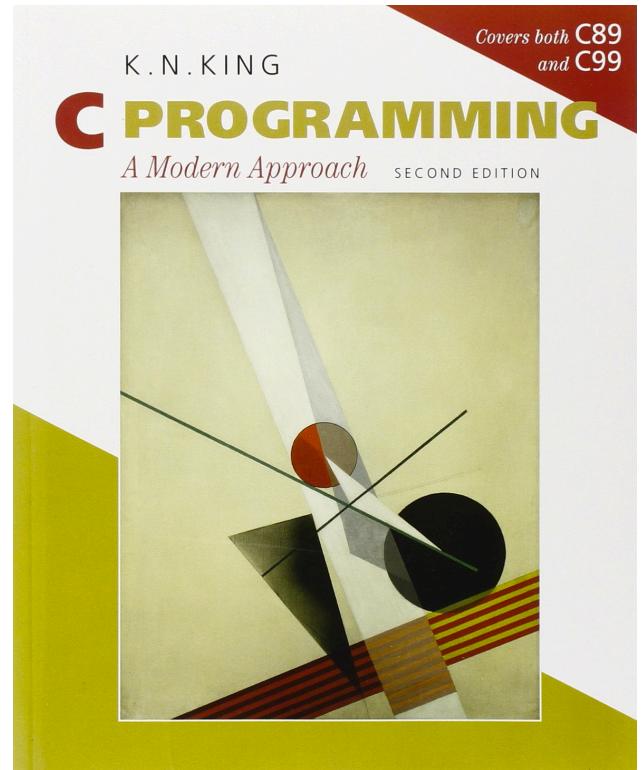
- Typical NCSU Grading Scale

Category	Weight
Quizzes	8
Exercises	8
Projects	40
First Exam	12
Second Exam	12
Final Exam	20

Points Earned	Letter Grade
97	A+
93	A
90	A-
87	B+
83	B
80	B-
77	C+
73	C
70	C-
67	D+
63	D
60	D-

Required Textbook

- King, C Programming, A Modern Approach, 2nd edition
 - Covers C89 and C99



Topics

- C Programming
 - Language elements
 - Types and representation
 - Expressions and statements
 - Memory allocation and management
 - Tools for compilation, debugging, profiling, source control, etc.
- Eventually, some C++
- Syllabus with list of topics & readings on Moodle

Exams

- Preliminary exams during class
 - At about the 1/3 and 2/3 points in the semester
 - Second exam focuses on material since the first exam
 - ... but you should treat it as if it's comprehensive
- Final exam as scheduled by the university
- You get to bring a 3x5 card of notes to each exam
 - Handwritten, with your name written on it
 - Both sides if you like
 - Will be collected at the end of each exam (why?)

Daily Quiz

- A quiz at the end of class, almost every day
- Usually the last 3 to 5 minutes of class
- Usually multiple choice
- Usually individual
- Usually covering material from today's lecture and immediately previous lecture
- Drop 3 lowest quizzes ... and 5 percent worth of the remaining points

Exercises

- Small programming problems outside class
- Usually due on Sunday evening, 11:00 pm
 - Including during the last week of class
- Same as quizzes for dropping grades

Programming Projects

- Apply what we've learned to larger, more interesting problems
 - Six of these, maybe some that build on previous projects.
 - Generally completed individually
 - Submitted electronically
 - Early submission: ☺
 - Late submission: ☹
- 24-hour late submission window, 20 percent penalty

Your Sympathy Folder



- A catch-all for anything I can't grade
 - Submission past deadline ☹
 - Forgot to submit a file ☹
 - A small mistake that prevented a program from working ☹
- All of this may help you out at the end of the semester

Style Requirements

- We have a style guide
- Linked from the course homepage
- Where the curly brackets go, what to comment, prohibitions against magic numbers, global variables, that kind of thing
- Correct style will be required on programming projects
- ... but not on exercise submissions

Communication

- Course Website
- Discussion and announcements via Piazza

How to Enjoy C and Software Tools

- Do the exercises
 - Lots of opportunities to practice
 - Make sure you understand what we're covering
- Come to class
 - Make sure you understand things the first time
 - Ask questions as we go
 - Earn some cheap quiz points
- Use available resources
 - Course homepage, textbook, lecture slides, examples
 - Scheduled office hours, or just stop by
 - Piazza discussion group