CSE 230
Intermediate Programming in C and C++
Course Information

Fall 2017

Stony Brook University

Instructor: Shebuti Rayana

Course Description

- Intermediate programming concepts using the C language in a UNIX environment.

- Files, systems calls, stream I/O, the C preprocessor, bitwise operations, the use of makefiles, advanced formatting of input and output, conversions.

- Introduction to object-oriented programming using C++; classes, objects, inheritance, aggregation, and overloading. Suitable for all majors.

- https://www.cs.stonybrook.edu/students/Undergraduate-Studies/courses/CSE230

Course Prerequisites

- **CSE 130** or **CSE 220** or **ESE 124** or **ESG 111** or **BME 120** or **MEC 102**

Official Course Outcomes

■ Following are the official course goals agreed upon by the faculty for this course:

– A systematic introduction to the C language and C++ for students who have been previously exposed to another high-level programming language.

– Introduce aspects of the UNIX operating system relevant to developing C and C++ programs, such as utilities, system calls, and standard libraries.

Topics

- Major topics covered in this course:
  - *Functions and parameter passing*
  - *Arrays, Pointers, and Strings*
  - *Bitwise operators*
  - *Preprocessors*
  - *Unix I/O interface*
  - *Input and output system calls*
  - *Program creation and debugging tools*
- Object Oriented Programming (OOP) – C++
  - *Data Abstraction - Classes and Objects*
  - *Operator Overloading*
  - *Inheritance*
  - *Polymorphism*
  - *Exceptions and templates*

Instructor Information

- **Shebuti Rayana**
  - 107 New Computer Science Building
- Office Hours:
  - Monday 11:30 AM – 1:30 PM,
  - Wednesday 11:30 AM - 12:30 PM or by appointment
- Email:
  - shebuti (dot) rayana (at) stonybrook (dot) edu
  - Please include "CSE230" in the email subject and your name, student Id in the email body

General Information

- Meeting information
- Lectures: MWF 9:00 AM – 9:53 AM at MELVILLE LBR W4550 WESTCAMPUS

- Course Web page:
- http://www.cs.stonybrook.edu/~cse230

- Blackboard will be used for assignments, grades and course materials
- Information about TA's will be soon posted in the course webpage.

Text Books

- *A Book on C*, by Al Kelly and Ira Pohl, Addison-Wesley, Fourth Edition 1998 (ISBN: 0-201-18399-4).

- *C How to Program*, by Paul Deitel and Harvey Deitel, Prentice Hall, Eight Edition 2016 (ISBN-13: 9780133976892 or 9780134225340).

- Reference: *The C Programming Language*, by Brian W. Kernighan and Dennis Ritchie, Prentice Hall, Second Edition 1988 (ISBN: 0-13-110362-8).

Exam Dates

- Midterm Exam:

– Monday, October 16, 2017,
9:00 AM – 9:53 AM, classtime, in classroom

– Monday, November 13, 2017,
9:00 AM – 9:53 AM, classtime, in classroom

- **Final Exam:**

– Wednesday, December 13, 2017,
8:30 PM – 11:00 PM, in classroom

– See University schedule for Final Exam here:
http://www.stonybrook.edu/commcms/registrar/registration/exams

Exam Rules

- Students arriving late will not be given extra time.

- All exam answers must be written in blue or black ink. Specifically, the use of red of green ink is not allowed.

- There shall be no makeup exams.

Grading Schema

■ Grades will be based on homeworks, quizzes, and exams according to the following weights:

– *Homework – 30% (6 assignments each 5%)*

– *Quiz – 10%*

– *Midterm Exam – 30% (each 15%)*

– *Final Exam– 30%*

■ **Incompletes:** Incomplete (I) grades will not be given in CSE-230 except in extraordinary cases

■ The Pass/No Credit (P/NC) option is not available.

■ There are no extra credit options.

Grading Information

■ Final Grade

– The final grade you receive in this course will reflect the extent to which you have mastered data structures and their applications

– How much someone needs a specific grade or how close they are to the next higher grade will not effect on grade

– The grades provided at the end of the semester is final, except for situations involving grading errors

Final grade will not be altered for any reason.
So please do NOT ask me to do so!

Assignments/Lecture Slides

- Assignments will be available on Blackboard

- Lecture slides and handouts will be available on course web page

- **Computer Facilities:** Each student enrolled in CSE-230 is encouraged to get an account on the Instructional Computing (IC) machines, i.e. sparky. You can get an account in the Academic Computer Center. Follow the link below for more information,
  https://it.stonybrook.edu/services/sparky-unix

Write, Compile, Execute your First C Code in UNIX Environment

- Instructions for your own Linux System
  http://www3.cs.stonybrook.edu/~cse230/CSE230_1.html

- Instructions for Sparky
  http://www3.cs.stonybrook.edu/~cse230/CSE230_2.html

Homework Submission

1. All assignments will be submitted through blackboard

2. Unexecutable code and/or late submission will not receive any credit.

3. Unless specified otherwise, only your C/C++ code should be submitted (i.e., only the .c/.cpp files) as a single .zip

4. The file name should be in the following format:
   < firstname >_< lastname >_< id > _hw< num >.zip

   – *For example, if John Doe with student ID 123456789 is submitting the third homework, the submitted file should be named john_doe_123456789_hw3.zip*

Regrading Homeworks

■ Please meet with a TA or the instructor and arrange for regrading.

■ **You have one week from the day grades are posted or mailed or announced**

– *Late requests will not be entertained*

Disability Support Service

- If you have a physical, psychological, medical or learning disability, contact the DSS office at Room 128 ECC. Phone 632-6748/TDD

- If you are planning to take an exam at DSS office, you need to tell me ahead of time for every exam.

- **All documentation of disability is confidential.**

- For more info visit: http://www.stonybrook.edu/ehs/fire/disabilities

Academic Integrity

- You can discuss general assignment concepts with other students: explaining how to use systems or tools and helping others with high-level design issues

- You **MAY NOT share** assignments, source code or other answers by copying, retyping, looking at, or supplying a file

– Assignments are subject to manual and automated similarity checking (We do check! and our tools for doing this are much better than cheaters think)

- If you cheat, you will be brought up on academic dishonesty charges - we follow the university policy:

– http://www.stonybrook.edu/uaa/academicjudiciary

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.

Catastrophic Events

- Major illness, death in family

- Formulate a plan (with your CEAS academic advisor) to get back on track

- Advice

– *Once you start running late, it's really hard to catch up*

Advice

- Start working on the assignments as soon as they are provided.

- If you have questions, use Piazza first instead of sending emails. That way, everyone in the class can benefit from the Q&A.

- The Internet is your friend!

- You can find the answer of most of your questions online. If you are stuck, use Google (or Bing or . . .).

- Do not copy-paste code from the Internet! Remember, this will be treated as dishonest conduct. If you have any doubts about using some code, ask a TA or the instructor.

- The TAs are all students who have excelled in this course in the past. You should feel free to ask them for help.

- Do no ask the TA's to solve the problems for you.

Please

- Please be on time

- Please show respect for your fellow classmates

- Please turn off (or put in vibration mode) your mobile phones

- On topic questions are welcome

Welcome and Enjoy