CSE 130: Introduction to C Programming

Stony Brook University, Spring 2017

Course Description

CSE 130 is an introduction to programming concepts using the C programming language. Topics include variables, data types, expressions, conditional and iterative statements, and functions. It also covers program organization, structures, pointers, arrays and strings. It includes programming projects of an interdisciplinary nature and is suitable as an introductory programming course for all majors.

Prerequisite: Level 3 on the mathematics placement examination

Course Objectives

- Students will be able to write, compile, and independently run computer programs in C that utilize basic features of the programming language to solve various introductory problems from mathematics, the sciences, and text processing

- Students will be able to detect whether any elementary C program is correct given some initial input and, if not, demonstrate where to find the computational error(s)

- Students will be able to write small programs in an exam environment that demonstrate their problem-solving abilities and proficiency with the language syntax

Course Information

Lecture Meetings: Tuesday and Thursday, 4:00–5:20 PM, in Old Computer Science 2120

Textbook: *A Book on C, 4th Edition*, by Al Kelley and Ira Pohl (Addison-Wesley 1998). Copies of the textbook are available on 2-hour reserve in the Science and Engineering Library.

Course Software: Students are encouraged to download and use the Visual Studio Community IDE (Windows, free) or Xcode (Mac OS X, free). Students are also encouraged to obtain a (free, University-provided) Sparky Unix account in which to develop and test their assignment code.

Course Web Site: http://www.cs.stonybrook.edu/~cse130

All course materials, assignments, and grades will be posted on Blackboard.

Instructor Information

Instructor: Michael Tashbook (<tashbook@cs.stonybrook.edu>)

Instructor Office Hours: Monday, 3:00–6:00 PM, and Tuesday/Thursday, 6:00–7:30 PM, in New Computer Science 204. I am also available at other times by appointment.

TAs and TA office hours will be posted on Blackboard and the course Web page.

Important Dates

- 2/23: Midterm 1 (during class)
- 3/9: No class (Instructor out of town)
- 3/14–3/16: No class (Spring Break)
- 4/6: Midterm 2 (during class)
- 5/15: Final Exam (2:15–5:00 PM, in CS 2120)

Grading Policy

Course grades will be based on a combination of:

- 4 homework assignments (16% total)

- one final programming project (8%)

- 11 in-class quizzes (11% total)

- two computer-based midterm exams (15% and 20%, respectively)

- one computer-based final examination (30%)

Final grades are **NOT** curved. See the course Web page for the letter grade cutoffs. See Blackboard for all grades.

Late Assignment Policy: Late submissions of the homework assignments and project will **NOT** be accepted for grading, barring a valid medical, religious, or other excuse (with documentation). Late submissions with a valid excuse may be accepted at the instructor's discretion, with an accompanying 50% penalty to the assignment grade.

Grade Challenge Policy: The TAs and I will endeavor to post grades as soon as possible after assignments/exams are submitted (normally within 7–10 days). Questions about or challenges to assignment or midterm exam grading **MUST** be made within **TWO WEEKS** of the grades being posted; after that period, grades are considered final for that assignment or exam.

Exam Policies: All students must bring photo ID to each exam. Students will not be admitted more than 10 minutes late to any exam. Make-up exams will be granted at the instructor's discretion, and **ONLY** for valid medical reasons (a doctor's note is required), for religious reasons, or for documented participation in University-sponsored events. Except for medical excuses, reasonable prior notification (at least 48 hours prior to the exam) to the instructor is **REQUIRED** in order for a make-up opportunity to be granted. Quizzes may **NOT** be made up.

Policy on Electronic Devices in Class

Students are encouraged to bring laptops and tablet devices to class *for note-taking purposes only*. All communication and entertainment devices should be silenced or (preferably) turned off for the duration of the class unless otherwise directed by the instructor. No electronic devices of any sort, other than USB flash drives and the computers installed in the exam room, may be consulted or used during exams; this will be considered an instance of academic dishonesty, and will be treated as such.

Students With Disabilities

If you have a physical, psychological, medical or learning disability that may have an impact on your ability to carry out assigned course work, please contact the staff in the Disabled Student Services (DSS) office, 128 Educational Communications Center (E.C.C), Phone/TTY: (631) 632-6748. DSS will review your concerns and determine with you what accommodations are necessary and appropriate. All information and documentation of disability are confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information please visit **http://www.stonybrook.edu/ehs/fire/** and search Fire Safety and Evacuation.

Academic Integrity Policy

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at **http://www.stonybrook.edu/uaa/academicjudiciary/** (Adopted by the Undergraduate Council 9/12/06)

Students who are found guilty of academic dishonesty will automatically receive a final grade of 'F' for the course.

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.

Use of Email for Official Communication

Students, faculty, and staff are responsible for making sure they are receiving and checking for official University communications at their primary campus email address (@stonybrook.edu) on a regular basis, or making sure they forward their Stony Brook mail to a personal email account (Google Apps users only).

Tentative Course Calendar

Supplemental reading assignments will be posted on Blackboard as the semester progresses.

Week	Date	Main Topic(s)	Notes/Reading
1	January 24	Introduction, Basic Concepts	
	January 26	An Overview of C	Sections 1.1–1.7
2	January 31	**Quiz 1 (in class);** Lexical Elements	Sections 2.1–2.12
	February 2	Fundamental Data Types	Sections 3.1–3.11
3	February 7	**Quiz 2 (in class);** Flow of Control: Conditionals	Sections 4.1–4.7, 4.16, 4.17
	February 9	Flow of Control: Loops	Sections 4.8–4.11; **Homework 1 due 2/10**
4	February 14	**Quiz 3 (in class);** Flow of Control: Loops (Continued)	Sections 4.12–4.15
	February 16	TBA	
5	February 21	Exam Review (in class)	
	February 23	**Midterm 1 (in class)**	
6	February 28	Functions	Sections 5.1–5.7; **Homework 2 due 2/28**
	March 2	**Quiz 4 (in class);** Functions (Continued)	Sections 5.8–5.10
7	March 7	**Quiz 5 (in class);** Storage Classes	Sections 5.11–5.13
	March 9	**No Class (Instructor out of town)**	
8	March 14	**No Class (Spring Break)**	
	March 16	**No Class (Spring Break)**	
9	March 21	Functions and Recursion	Sections 5.14–5.15
	March 23	**Quiz 6 (in class);** Functions and Recursion (Continued)	**Homework 3 due 3/24**

Week	Date	Main Topic(s)	Notes/Reading
10	March 28	Arrays	Sections 1.8, 6.1
	March 30	**Quiz 7 (in class);** Pointers	Sections 6.2–6.9
11	April 4	Exam Review (in class)	
	April 6	**Midterm 2 (in class)**	
12	April 11	Strings	Sections 6.10–6.11
	April 13	**Quiz 8 (in class);** Arrays, Part 2	Sections 6.12–6.19
13	April 18	Enumeration Types	Sections 7.5–7.6; **Homework 4 due 4/18**
	April 20	**Quiz 9 (in class);** Structures	Sections 9.1–9.6
14	April 25	Files and Advanced I/O	Sections 1.9, 11.1–11.9
	April 27	**Quiz 10 (in class);** Other topics as appropriate	
15	May 2	Other topics as appropriate	
	May 4	**Quiz 11 (in class);** Other topics as appropriate	**Final project due 5/5**
Finals		**Final Exam** (Monday, 5/15, 2:15–5:00 PM, in Old Computer Science 2120)	