# CS 137 - Programming Principles - Course Outline – Fall 2019

## Overview

Provides an introduction to fundamental programming principles for first-year Software Engineering students. Topics include: procedures and parameter passing, arrays and structures, recursion, sorting, pointers and simple dynamic structures, space and time analysis of designs, and design methodologies. The course will be taught using the C programming language.

## Course Outline

Review of fundamental programming concepts and their application. Procedures and parameter passing. Arrays and structures. Recursion. Sorting. Pointers and simple dynamic structures. Space and time analysis of designs. Design methodologies.

## Section and Instructor Information

Section 001, 15:30-16:50 W, 11:30-12:50 F, MC 1085 and the following additional Fridays:
September 20th, October 4th, November 8th 3:30-4:20 MC 1085
No lecture on October 23rd due to Midterm
Lab: Tuesday September 10th at 8:30-9:20 or 9:30-10:20 MC 3003
Tutorials: Tuesdays (From September 17th on) at 8:30-9:20 or 9:30-10:20 MC 4060
Rob Hackman, DC 2128, `r2hackma@uwaterloo.ca`

Websites:

- `www.student.cs.uwaterloo.ca/~cs137`
- `https://piazza.com/`

Office Hours: Wednesdays 12:30-1:30pm in DC 2128 **and by appointment**.
Office Hours for our ISA Benjamin Chen: Wednesdays and Thursdays 5:00-6:30pm.
Email address: `cs137@uwaterloo.ca`.
Instructional support coordinator: John Akinyemi, MC 4011, `jakinyem@uwaterloo.ca` ext. 37627

## Course Website

In this course, we will use Marmoset, Piazza and a public website.

- All content related to the course lectures will be on the public website stated above.
- All content relating to grading (assignments, tests, etc.) will be on the website (password protected).
- All non-personal questions should be posted on Piazza.
- All homework submissions will be done on Marmoset.

## Textbook

K.N. King, C Programming: A Modern Approach, second edition (optional)

### Mark Computation:

- Assignments 8% (10 assignments, take best 8 of last 9. No exceptions will be granted for any assignments. A0 is worth 0% but must be completed to receive grades for others and cannot be exempt.)
- Midterm Exam (Wednesday October 23rd from **10:30am-12:20pm** in RCH 103 and MC 2066 Check on Odyssey) 35%
- Final Exam and In Class Clickers (the maximum of $57\%, 0\%$ and $50\%, 7\%$). Final exam date will be announced later.

### Course Work

There are clicker questions (see below), ten assignments, a midterm exam, and a final exam. The first assignment will not be graded; the remaining assignments are worth 1% each. Assignments are due at 9 pm on Thursdays, as indicated on the course website (Exceptions: October 18th and 25th there will be no assignments due). Assignments must be submitted through the course website using Marmoset. All grades will be listed on the website (password protected). Due dates are firm and final. Late work will receive a grade of 0. This includes instances of illness (so use your freebie wisely!)

### Clickers

Clickers are an in class polling system we will be using. Throughout the term, I will be presenting questions in class and then polling the audience. For these questions, students will receive 2 points for a correct answer and 1 point for any answer and your best 75% of questions will count towards this component. This will be used in conjunction with your final examination to determine a portion of your final grade (either 7% clickers and 50% final exam or 0% clickers and 57% final exam; whichever is greater).

### Plagiarism

All work in CS 137 is to be done individually. The penalty for plagiarism on assignments (first offense) is an assigned mark of 0 percent on the assignment and a 5 percent reduction of the final grade, consistent with School of Computer Science policy. In addition, a letter detailing the offense is sent to the Associate Dean of Undergraduate Studies, meaning that subsequent offenses will carry more severe penalties, up to suspension or expulsion. We will run Moss on your submissions to ensure there is no plagiarism. Please note: Sending pictures of solutions/attempted solutions to one another is an act of plagiarism! Discussing solutions with friends is okay and encouraged **provided you are alone by yourself with no notes while you type/write up your formal solutions!** If you cannot type up your solutions without aides, then you really haven't figured out how to do the problem. There is also an excellent memo on posting solutions on GitHub/publicly. Please do not do this as this is also an act of plagiarism (Waterloo has a private GitHub repository `git.uwaterloo.ca` where you can host solutions to share only with employers looking for a record of your work).

### Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. Check the academic integrity Web site for more information at `https://uwaterloo.ca/academic-integrity/`.

### Use of MOSS

MOSS (Measure of Software Similarities) is used in CSNNN [course name] as a mean of comparing students? assignments in order to support academic integrity. You have the option to opt out of this but if you choose to exercise this option, we will still compare your assignment based on the other submissions.

### Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4, at `http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm`. When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

### Discipline

A student is expected to know what constitutes academic integrity to avoid committing academic offenses and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about 'rules' for group work/collaboration should seek guidance from the course professor, academic advisor, or the undergraduate associate dean. For information on categories of offenses and types of penalties, students should refer to Policy 71, Student Discipline, at `http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm`. For typical penalties check Guidelines for the Assessment of Penalties at `http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm`.

### Appeals

A decision made or penalty imposed under Policy 70, Student Petitions and Grievances (other than a petition) or Policy 71, Student Discipline may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72, Student Appeals, at `http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm`.

### Illness

As mentioned there will be no exceptions for assignments whatsoever (you get one free assignment). For a midterm or final exam, a doctor's note must be provided within 48 hours of the exam (exceptional circumstances can apply if necessary). If such a situation arises for the midterm, either a makeup exam will be administered by the Instructional Support Coordinator. or weighting will shift to the final exam. Missing the final examination will follow the university's policy on missing a final examination. Failure to arrange a suitable sitting will result in an INC for the course. If you choose to write an exam while sick, your grade will count and there will not be any weight shifting.

## Disabilities

Note for students with disabilities: AccessAbility Services, located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum (see `http://uwaterloo.ca/disability-services`). If you require academic accommodations to lessen the impact of your disability, please register with them at the beginning of each academic term.