

1. Calendar Information

ENGG 233 Computing for Engineers

Overview of computer systems. Functions of software components: operating systems, editors, compilers. Programming in a high-level language: selection and loop structures, routines, array and record types, text file operations. Introduction to object-based programming: use of class libraries and construction of simple classes.

Course Hours: H(3-2)

Calendar Reference:

<http://www.ucalgary.ca/pubs/calendar/current/engineering.html#10162>

2. Learning Outcomes

At the end of this course, you will be able to:

1. Solve fairly simple computer programs using the C++ language, but which are applicable to many other programming languages.
2. Understand the procedures involved in developing algorithms.
3. Read and write the basic syntax of the C++ language.
4. Translate engineering problem specifications into working computer programs.
5. Understand the basics of working with functions, arrays/vectors, matrices, data records, and reading from and writing into a text file.

3. Timetable

Section	Days of the Week	Start Time	Duration (Minutes)	Location
L01	MoWeFr	10:00	10:50	EDC 179
L02	MoWeFr	17:00	17:50	EDC 179
L03	MoWeFr	09:00	09:50	EDC 179
L04	MoWeFr	08:00	08:50	SB 103
B01, B02, B29	Mo	08:00	09:50	ENC 124
B03, B04, B05	We	08:00	09:50	ENC 124
B06, B07, B30	Fr	08:00	09:50	ENC 124
B08, B09, B31	Mo	15:00	16:50	ENC 124
B10, B11, B12	We	15:00	16:50	ENC 124
B13, B14, B32	Fr	15:00	16:50	ENC 124
B15, B16, B33	Mo	10:00	11:50	ENC 124
B17, B18, B19	We	10:00	11:50	ENC 124
B20, B21, B34	Fr	10:00	11:50	ENC 124
B22, B23, B35	Mo	13:00	14:50	ENC 124
B24, B25, B26	We	13:00	14:50	ENC 124
B27, B28, B36	Fr	13:00	14:50	ENC 124

B29-				

4. Course Instructors

Course Coordinator

Section	Name	Phone	Office	Email
All Sections	Dr. M. Moussavi	403-220-6231	ICT 541	moussam@ucalgary.ca

Other Instructors

Section	Name	Phone	Office	Email
L01	Dr. M. Moussavi	403-220-6231	ICT 541	moussam@ucalgary.ca
L02	Mr. M. Moshirpour	403-220-5439	ICT 532	mmoshirp@ucalgary.ca
L03	Mr. M. Durgham	TBA	ENE 331-A	mohannad.al.durgham@utoronto.ca
L04	Dr. H. Lahamy	TBA	ENE 331-A	hdalaham@ucalgary.ca

Teaching Assistants

List of ENGG-233 Teaching Assistants will be posted on the course D2L website at:
<http://d2l.ucalgary.ca>

5. Examinations

There will be a midterm and a final examination. All examinations will be closed book and closed notes.

- The midterm examination will be held on November 6, 2014, from 18:30 – 20:30. Locations for the exam will be announced in class and posted on D2L
- The timetable for Registrar Scheduled final exams will be announce at the University's Enrolment Services website, <http://www.ucalgary.ca/registrar/>.

6. Use of Calculators in Examinations

No calculator or other electronic devices are allowed during exams.

7. Final Grade Determination

The final grade in this course will be based on the following components:

Component	Learning Outcome(s) Evaluated	Weight
Assignments	1,2,3,4,5	20 %
Midterm Examination	1,2,3,4,5	40 %
Final Examination	1,2,3,4,5	40 %

Total: 100 %

Notes:

- a) You must either (a) achieve at least 50% on the final exam or (b) achieve at least 50% on the weighted average of the midterm and final exam. You must also achieve an average of at least 50% on the lab section of the course. If you do not satisfy these caveats, you will not receive a grade of higher than D+ in this course.
- b) Conversion from a score out of 100 to a letter grade will be done using a scale determined after the final examination has been marked. This allows the creation of a scale appropriate to the relative difficulty or easiness of the term work and the exams.
- c) Please refer to the Additional Course Information section below regarding the late lab submission policy for the course.

8. Textbook

The following textbook is required for this course:

Title	C++ For Everyone
Author(s)	Cay Horstmann
Edition, Year	Second Edition
Publisher	John Wiley & Sons, Inc.

9. Course PoliciesAdvising Syllabus

All Schulich School of Engineering students and instructors have a responsibility to familiarize themselves with the policies described in the Schulich School of Engineering Advising Syllabus available at:

<http://schulich.ucalgary.ca/undergraduate/advising>

Emergency Evacuation/Assembly Points

In the event of an alarm sounding, all classrooms and labs must be evacuated immediately. Please respond to alarms promptly by leaving the building by the closest available exit. Faculty and students must remain outside the building until the 'all clear' has been given by a Fire Marshall. In case of emergency, call 220-5333.

Assembly Points have been identified across campus. These areas have been selected as they are large enough to hold a significant number of people and will provide an evacuated population access to washroom facilities and protection from the elements. More information on assembly points can be found at <http://www.ucalgary.ca/emergencyplan/assemblypoints>.

10. Additional Course InformationCourse Schedule

The following table provides a breakdown of the course. The course lectures have been designed to coincide with the labs and the examinations as much as possible.

Section	Approx. 50 min Lectures	Sections of Text** (Horstmann 2 nd Edition)
Course Introduction	1	
Intro to Computers and Programming	1	1.1 to 1.4; 1.8; 1.7
Basic Elements of C++	6	1.3 to 1.7; 2.1 to 2.5
Decision Structures	3	3.1 to 3.5, 3.7
Iteration Structures	3	4.1 to 4.5, 4.7 to 4.8
Functions	6	5.1 to 5.9
Midterm Review Lecture	1	
Abstract Data Types and Structs	2	Supplemental material will be posted on the D2L
Arrays and Vectors	5	6.1 to 6.6
Strings	2	2.5; 8.2.3
Streams and File I/O	2	3.8; 8.1 to 8.3
Introduction to Software Application Development and Software Design	3	Supplemental material will be posted on the D2L
Final Review Lectures	2	

** Includes all features such as “How To”, “Worked Examples”, “Common Errors”, “Quality Tips”, “Advanced Topics” and “Productivity Hints”

D2L System

Students will be required to use the D2L system to download labs, to check their current marks, and to view announcements from the course coordinator and the lab coordinator. Frequent viewing of this system is therefore recommended. The web address is:

<http://d2l.ucalgary.ca>

Login requires the user to have a current University Computing Service (UCS) username and password.

Working on your Lab Assignments

ENGG 233 students are expected in Fall 2014 to bring their own laptops to the weekly scheduled lab sessions, on the first floor of Engineering C Block (room number ENC-124). In this room, you can connect your laptop to the power outlets available in each table (if needed) to work on your lab assignment. There are also a limited number of desktops in this room that are only available to the students who have issues with their own laptops or somehow need a temporary access to the system.

Supported Operating System and IDE for the Course

Although using a particular operating system on your laptop is not mandatory, but the official operating system for the lab assignments is Windows and the supported Integrated Development Environment tool IDE for C++ programming is Visual Studio.

Lab Handouts

The lab handouts will be posted on the D2L website at least two days before the first lab period.

Lab Submission

In most cases, each lab assignment contains exercises that a paper copy of the assignment must be submitted at the start of the lab to the teaching assistants. Lab assignments also contain exercises that must be completed and submitted electronically using the D2L Dropbox, as directed in the lab instructions. The due dates for the lab assignments are also provided in the lab handouts.

Late Lab Submission

A penalty of 20% will be deducted for labs that are late by up to 24 hours. Labs submitted later than 24 hours after the due time will be marked as zero. Circumstances beyond ones control (e.g., sickness, etc.) should be discussed with your TA and instructor.