CPSC 1181: Object-oriented Computing

Spring 2017 (201710)

Course Format: Lecture 4.0 h + Seminar 0.0 h + Lab 2.0 h

Credits: 3 **Transfer Credit:** For information, visit bctransferguide.ca

Course Description:

Introduces the fundamental concepts of programming from an object-oriented (OO) perspective: abstraction; objects; classes and class hierarchies; methods; parameter passing; encapsulation and information hiding; inheritance; polymorphism. OO design with modeling tools (e.g., class diagrams). Application of simple container/collection classes; event-driven programming; exception handling; GUI; multi-threading; and networking. Emphasizes good software engineering principles using a language that supports the OO paradigm (e.g., Java).

Prerequisites:

A minimum grade of "C" in CPSC 1150 or 1155; or permission of department. Prerequisites are valid for only three years.

Learning Outcomes:

Upon successful completion of CPSC1181, the student will be able to:

- explain encapsulation, information hiding, inheritance, and polymorphism
- use modeling tools, such as UML, to design objects before coding, and for reverse engineering
- design, develop, implement and properly document programs for various applications of intermediate difficulty using an OO language, such as Java.

Instructor:

Jeremy Hilliker	A-383	604-323-5511 x2421	jhilliker@langara.ca

If emailing, please put "CPSC 1181" at the start of your subject line.

Office Hours (subject to change)**:**

Monday	10:30 – 11:20 2:30 – 3:20	A-383
Tuesday	2:30p – 3:20	B-019
Wednesday	10:30 – 11:20 2:30 – 3:20	A-383

Textbook and Course Materials:

Cay Horstmann. 2015. *Big Java: Early Objects, (6th ed.)*. John Wiley & Sons, Hoboken, NJ.

Langara Desire2Learn: CPSC 1181

Big Java's Student Companion Website, Javadoc: J8SE

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Assessments and Weighting:

Assignments and Labs:	35%
Quizzes & Midterms (2):	30%
Final Exam:	35%

Grading:

GPA	Grade	Average	Description
4.33	A+	90 – 100	Distinguished Achievement
4.00	A	85 – 89	
3.67	A-	80 – 84	
3.33	B+	76 – 79	Above Average Achievement
3.00	B	72 – 75	
2.67	B-	68 – 71	
2.33	C+	64 – 67	Satisfactory Achievement
2.00	C	60 – 63	
1.67	C-	55 – 59	
1.00	D	50 – 54	Marginal Performance
0.00	F	< 50%	Unsatisfactory
0.00	N		Did not complete
-	W		Withdrawal

- See Departmental Policies for restrictions.
- Final grades may be scaled at the instructor's discretion.

Detailed Course Schedule (subject to change)**:**

Week	of	Lecture	Readings	Midterms
1	May 1st	Data Types, Strings, Testing	c. 1, 4-6, B, C, E-G, I	
2	May 8th	Using Objects, Implementing Classes	c. 2, 3	
3	May 15th	Arrays, Array Lists, Collections	c. 7, 15	
4	May 22nd	2D graphics, Designing Classes	c. 2, 8	
5	May 29th	Inheritance, Polymorphism, Abstract Classes	c. 9	
6	June 5th	Interfaces, Events, Lambda	c. 10	Tues, June 6th
7	June 12th	Streams	c. 19	
8	June 19th	OO Design, UML	c. 12	
9	June 26th	I/O, Exceptions	c. 11	
10	July 3rd	GUI, Layout, Swing	c. 20	Tues, July 4th
11	July 10th	Basic Concurrency, Callbacks	c. 22	
12	July 17th	Networking	c. 23	
13	Jul 24th	More Concurrency: Race Conditions & Deadlock	c. 22	
-	-	Exam period: July 31st – Aug 11th	-	-

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

College Policies:

F1004 - Code of Academic Conduct

E1003 - Student Code of Conduct

E2008 - Academic Standing - Academic Probation and Academic Suspension

E2006 - Appeal of Final Grade

F1002 - Concerns about Instruction

E2011 - Withdrawal from Courses and Deferred Standing

This course may use an electronic (online) instructional resource that is located outside of Canada for mandatory graded class work. You may be required to enter personal information, such as your name and email address, to log in to this resource. This means that your personal information could be stored on servers located outside of Canada and may be accessed by U.S. authorities, subject to federal laws. Where possible you may log in with an email pseudonym as long as you provide the pseudonym to me so I can identify you when reviewing your class work.

Departmental Policies:

From http://langara.ca/programs-and-courses/courses/CPSC/, as of April 30th, 2017.

Prerequisites

Prerequisites for courses in Computer Science are valid for only three years. Students wanting to register in a course for which the prerequisite was taken more than three years ago will require departmental permission. Students may be required to write a diagnostic test or to "upgrade" the prerequisite. A course may only be used as a prerequisite if the Computer Science grade is at least 'C'.

Repeating a course

A Computer Science course may be taken only twice, regardless of the grade earned in the first enrolment. The Department Chair, or delegate, will decide on exceptions to this rule, usually on the basis of documented evidence of upgraded prerequisites.

Attendance

Students will receive a failing mark if they miss 20% of the course components including lectures, seminars, and labs, unless there is verifiable evidence of an acceptable excuse.

Grading

- In order to get a 'C' or higher grade in a Computer Science course, a student must achieve at least 50% average in the exam components of the course.
- In courses which involve programming, students are required to hand in an attempt at solving every assignment in order to pass a course. In addition, students are required to obtain a satisfactory programming mark.

Course Policies:

- The Student shall
  - attend lectures and labs;
  - be responsible for the materials covered, and notices given, in all lectures and labs;
  - check the course's Desire2Learn, and their Langara email, frequently.
- Assignments
  - are designed to be completed in 4 – 6 hours
  - shall be released in the first half of the week on Desire2Learn;
  - shall be submitted via Desire2Learn, unless noted otherwise;
    - assignments will not be accepted by email;
  - **are due on the following Monday at 11:30 pm**, unless noted otherwise;
    - assignments may be submitted "late" until Tuesday at 11:30 pm, unless noted otherwise;
      - there is a 20% penalty for late submission;
      - no further extensions will be given;
    - whereas the assignment drop-box may remain open later, submitting after the posted due dates may result in a grade of zero;
    - ensure to account for time to package and attach any necessary files before the deadline;
  - shall have their lowest mark dropped from The Student's assessment;
    - no "make-ups", extra-credit, or further exemptions will be given except under extremely extenuating circumstances;
    - don't waste this! The last assignment is pretty tough;
  - requiring compilation shall include source, header, documentation, data, and build files only;
    - do not submit object files (e.g.: ".class", and ".o" files), executable files, or IDE project files;
  - shall meet all requirements and constraints to be considered for full marks;
    - such constraints may be: programming language, interface, style, resources, etc.;
  - should be submitted early & often, but only the last submission shall be considered.
- No substitute midterms or quizzes will be given, even with a valid medical reason.
- Please bring up general questions about the course material and assignments in class. If you want to discuss your own work, please see me during my scheduled office hours.
- Please re-read your course notes, the relevant chapter(s) of the text, and use Google to research your question before coming to my office hours.
- Words importing a person of a particular gender include all persons of all gender identity.
- Plagiarism will not be tolerated under any circumstances.
  - **Plagiarism is falsely presenting another person's work or ideas as your own, using another person's work or ideas without acknowledging the source of the material, or allowing another person to do the same with your work.**
  - You are encouraged to discuss concepts with classmates, but the work that you submit must be your own. [I recommend that if you are discussing an assignment with someone, that you not write/type anything about it for an hour after talking, AND you acknowledge them as a source.]
  - Any plagiarized work automatically receives a grade of zero and is referred to the Office of Student Conduct and Judicial Affairs, which could result in a failing grade for the course, or the student being suspended or expelled from the College.
  - Don't cheat. It's a huge waste of my time.
  - See College Policies above.