CIS*2430 Course Overview

instructor

Dr. Judi McCuaig
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teaching assistants

TBA

This document contains an unofficial summary of the intended course activities. The official course outline will be distributed at a later date.

course description

CIS*2430 is a .5 credit course.

This course introduces the Object Oriented (OO) approach to programming and algorithm design. Topics will include the creation and use of objects from class libraries, user defined objects, inheritance, modularity, generic code, components, collections and containers, and an introduction to OO design methodologies.

CIS*2500 is a prerequisite for this course. CIS*2430 relies on a clear understanding of memory management and pointers.

learning outcomes

By the end of this course, you should be able to:

- Identify the major characteristics of different programming paradigms (procedural, functional, logical, and object-oriented)
- Differentiate between procedural and object-oriented paradigms
- Design and implement classes for an object-oriented program demonstrating correct use of encapsulation, constructors, method overloading, class invariants, accessors, mutators, instance variables and class variables.
- Construct class hierarchies that maximize code reuse through inheritance while accommodating differences through method overriding.
- Describe polymorphism and identify situations in which it is used in an OO program. .
- Use polymorphism, abstract methods/classes, and interfaces effectively to produce generic code
- Read and understand class diagrams written in UML (Unified Modeling Language)
- Compare event-driven programming with control-driven programming

communication

email	**cis2430@socs.uoguelph.ca**	Do not send course mail to instructors' personal email addresses
helpdesk	**2430helpdesk.socs.uoguelph.ca**	
website	**moodle.socs.uoguelph.ca**	course key will be available soon

times

Lecture	**M/W/F 2:30 pm - 3:20 pm** **M/W/F 4:30 pm - 5:20 pm**	via Zoom
Lab	**independent online**	You are not required to attend labs

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textbook

Open Text	**SCI-OER: Java** no cost to student	Open Source Resource will be made available in August

assessments

10%	**Labs** 6 Labs; 2% each; Drop lowest	all due 11:59 pm, November 30
20%	**Assignment One (A1)**	
20%	**Assignment Two (A2)**	
20%	**Assignment Three (A3)**	
30%	**Final Exam** TBA	

grading periods

Instructional Team will be grading assignments only during the weeks listed. **Work to be graded must be submitted 48 hours prior to the start of the grading period**.

For each grading period you may choose to redo your most recent assignment to improve the grade OR submit the next assignment. All assignment grading includes an in-person interview that will be conducted during the grading period.

Oct 3-8	**A1**	Week 4
Oct 24-29	**A2** A1 Redos	Week 7
Nov 14-20	**A3** Assignment Redos	Week 10
Nov 28-30	Assignment Redos	Week 12

computing requirements

All homework will be completed using the Java programming language. Third party libraries and frameworks may be used only with explicit approval of the course instructor. The OER Textbook resource is provided as a docker container and will contain all of the programming tools you need to complete the course.

You will be expected to understand how to create and run java programs without the use of an IDE. An IDE hides much of the process from beginners and prevents learning. We recommend using an editor, such as Sublime, or a smaller IDE such as VS-Code.

You must have access to a computing device and internet connection that allows you to share your screen in online meetings while having a voice conversation. While sharing your screen you will be asked to run your java programs so the device you use must be capable of compiling and running your java assignments.