CIS*3260 F16 Software Design IV: Course Outline
Software Architecture and System Design

Lecturer: Prof. Mark Wineberg
Office Hours: Tues, Thurs – 1pm to 2pm in Reynolds 214
Email: mwineber@ uoguelph.ca

Lectures: MCKN, Room 312 – Tues, Thurs 2:30pm to 3:50pm
Labs: REYN, Room 114 – Tues, Thurs 4:00pm to 5:20pm

Textbooks: *Recommended*

Software Engineering (10th *Ed*)
Ian Sommerville
Addison-Wesley, 2015

Object-Oriented Analysis and Design
John Deacon
Addison-Wesley, 2005

Head First Design Patterns
Eric Freeman, et.al.
O'Reilly Media, 2004/2014

Eloquent Ruby
Russell A. Olsen
Addison-Wesley, 2011

Course Website: url address – http://moodle.socs.uoguelph.ca
enrolment key – ReduceReuseRecycleCode

Course Objectives and Topics:

This course is a study of software architectures and system design methodologies. The course has an applied focus, and will involve software design and development experiences in teams, a literacy component, and the use of software development tools.

- OO Design
- Structural UML
- Structural Patterns
- Architectural Design
- Software Reuse
- Distributed Soft. Eng.
- Component-based Soft. Eng. and Service-Oriented Arch.

Grading:

[GP] Group Project 30%
- [6%] HL - *High Level Design* (written design document and walkthrough)
- [10%] DD - *Detailed Design* (written design document and walkthrough)
- [4%] ID - *Implemented Design* (written design document, impl. group's feedback)
- [10%] I - *Implementation* (code, walkthrough and written reflection)

All individual grades x_j will be calculated using the formulae below, the group grade x (out of 100%), and a group determined modifier m_j, where $0 \le m_j \le 2$

if $1 < m_j \le 2$ $x_j = (m_j - 1) * 100\% + (2 - m_j) * x$ (*more work than the group average*)
if $0 \le m_j \le 1$ $x_j = x * (1 + m_j) / 2$ (*the group average amount of work or less*)

Modifier m is settled on by the group during the walkthrough and should reflect the relative amount of work each student in the group did on that particular deliverable

Note: In a previous version of the course outline, the formulae were given in terms of x_i and m_i, where $x_j = x_i$ and $m_j = (2 - m_i)$

[A] Assignments 24%
- [8%] A1 (written answers)
- [16%] A2 (code and written answers)

[mA] Mini Assignments 12%
- [4%] mA1 (code and written answers)
- [4%] mA2 (code and written answers)
- [4%] mA3 (written answers)

[MT] Midterm 10% (written test)

[F] Final 24% (written test)

(*to pass the course* you need *a 50% grade or above overall*)

Late Policy:

Assignments and Project components:

- There is a 1% late penalty (out of 100%) per every 2 hours up to two days after the due date, after which the assignment/component will be given a grade of zero.

Midterm:

- If you miss the midterm you may write a challenge midterm, which will be given a pass/fail grade. If you pass the challenge midterm, the Final will be worth 34% instead of 24%.

When You Cannot Meet a Course Requirement

- When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course in writing, with your name, id#, and e-mail contact.
- See the undergraduate calendar for information on regulations and procedures for Academic Consideration: http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Timetable:

	Classes		Mini Asgn	Assign	Project	Tests	Mini Asgn	Assign	Project	Tests
	Tues	Thur					2 PM	2 PM	11:59 PM	
Intro		Sep 08								
W1	Sep 13	Sep 15								
W2	Sep 20	Sep 22	mA1		HL Design		Tue Sep 20		Sun Sep 25	
W3	Sep 27	Sep 29								
W4	Oct 04	Oct 06	mA2				Tue Oct 04			
W5		Oct 13			D Design				Wed Oct 12	
W6	Oct 18	Oct 20				MT				Thu Oct 20 (4PM)
W7	Oct 25	Oct 27			ID &Impl				Sun Oct 30	
W8	Nov 01	Nov 03								
W9	Nov 08	Nov 10		A1				Tue Nov 08		
W10	Nov 15	Nov 17	mA3				Tue Nov 15			
W11	Nov 22	Nov 24		A2a				Tue Nov 22		
W12	Nov 29	Dec 01		A2b				Thu Dec 01		
E1										
E2						F				Tue Dec 13 (7PM)

Errata:

Recording of Materials

- Presentations which are made in relation to course work—including lectures—cannot be recorded in any electronic media without the permission of the presenter, whether the instructor, a classmate or guest lecturer.

Academic Misconduct

- The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.
- University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct.
- Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.
- The Academic Misconduct Policy is detailed in the undergraduate calendar: http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml