Course Outline
SYSC 3110 Software Systems Development Laboratory

Lecturer
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Course Objectives
- Development of expertise in designing, implementing, and testing industrial-quality, reusable code through individual and team projects.
- Applying and extending previously acquired knowledge of patterns, frameworks, UML, iterative and incremental development, to medium and large-scale systems.

Prerequisite
SYSC 2100 and SYSC 2004 are the prerequisite for SYSC 3110, and students must have third-year status in Software Engineering. Students who have not satisfied the prerequisite must either: a) withdraw from the course, b) submit a prerequisite waiver online at www.sce.carleton.ca/ughelp, or c) will be deregistered from the course after the last day to register for courses in the term.

Textbook
Selected chapters from: Objects First with Java: A Practical Introduction Using BlueJ, any edition (the current one is the Sixth Edition), David J. Barnes and Michael Kolling, Pearson Education Limited/Prentice Hall.
Note that this was the textbook for many offerings of SYSC2004, i.e. a prerequisite course for SYSC3110.

Web Site
Course material and lab exercises will be posted on cuLearn.

Lecture and Lab Periods
Two one-hour lectures per week: time and location TBD
Labs 3 hours a week: time and location TBD. Important: there will be lab sheets distributed during those lab hours, which you will need to complete during the lab and submit as part of your overall grade.

Outline (more detail available on the course web site)
Part I User Interface Design as an Exercise in Using Design Patterns
Part II Design in Practice: Refactoring and Test-driven development
Part III Framework Studies: JUnit, Persistence and possibly others.
Lab hours will be used to introduce Eclipse as an Integrated Development Environment and to practice material introduced in class.
Project
A major component of the course is a project that will lead you through the process of building a reasonably complex system. This will be a group project. Each team member must participate in all aspects of the project: design, coding, testing and debugging, etc. The project will be divided into several milestones, which will be evaluated and graded separately, with the weight depending on the milestone.

Exams
There are two exams in this course: a lab exam (1/3 of the weight of the “Exam” component of the final grade), which will take place in the lab at some point during the term, and a closed-book final exam (2/3 of the “Exam” component) which will be held during the University's April examination period. It is important to note that the final exam is a closed-book exam and will require a thorough understanding of the topics discussed in class or in the lab, and so meticulous note-taking and study of those notes before the exam are important skills for success.

Students who miss the final exam may be granted permission to write a deferred examination (see the Undergraduate Calendar for regulations on deferred exams). These students have additional months to study and a less crowded examination schedule compared to their colleagues who write the final exam. As such, it is only fair to expect substantially better performance from these students on the deferred examination than on the final exam.

Evaluation and Grading Scheme
Students will be evaluated by means of in-lab assignments, a project, a lab exam and a final exam.

To pass the course, a student must pass the project and the examination component (D- or better in both components). For these students, the grade will be calculated as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Assignments:</td>
<td>10%</td>
</tr>
<tr>
<td>Project:</td>
<td>40%</td>
</tr>
<tr>
<td>Exam (lab exam + final exam):</td>
<td>50%</td>
</tr>
</tbody>
</table>

Plagiarism
Plagiarism (copying and handing in for credit someone else’s work) is a serious instructional offence that will not be tolerated. Please refer to the section on instructional offences in the Undergraduate Calendar for additional information.


You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for
accommodation is known to exist. For more details visit the Equity Services website:
http://www2.carleton.ca/equity/

Religious obligation: write to me with any requests for academic accommodation during
the first two weeks of class, or as soon as possible after the need for accommodation is
known to exist. For more details visit the Equity Services website:
http://www2.carleton.ca/equity/

Academic Accommodations for Students with Disabilities: “The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). Requests made within two weeks will be reviewed on a case-by-case basis. After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website (www.carleton.ca/pmc) for the deadline to request accommodations for the formally-scheduled exam (if applicable). “