

CS4472A/9550A Course Outline Fall 2017

1. Course Information:

o Course Calendar

- [Western Calendar Sessional Dates](#); see also [Western Multicultural Calendar](#)
- [W0] Thursday 7 Sept 2017: Classes Begin
- [W1] Tuesday 12 Sept 2017: first class meeting
- [W1] Friday 15 Sept 2017: Last day for late registration
- [W2] Tuesday 19 Sept 2017:
- [W3] Tuesday 26 Sept 2017: (practice 1 due end of Wednesday 27th Sept)
- [W4] Tuesday 3 Oct 2017: 1st Quiz (practice 2 due end of Wednesday 4th Oct)
- [W5] Monday 9 Oct 2017: [Thanksgiving Holiday](#) at Western as well as undergraduate Reading Week.
- [W6] Tuesday 17 Oct 2017: (practice 3 due end of Wednesday 18th Oct)
- [W7] Tuesday 24 Oct 2017: (practice 4 due end of Wednesday 25th Oct)
- [W8] Tuesday 31 Oct 2017: (practice 5 due end of Wednesday 1 Nov)
- [W9] Tuesday 7 Nov 2017: 2nd Quiz (practice 6 due end of Wednesday 8th Nov)
- [W9] Sunday 12 Nov 2017: last day to drop without academic penalty -- at least 3 days prior assessment for 15% of course mark should be returned. the weekly practice marks alone would be sufficient to accomplish this.
- [W10] Tuesday 14 Nov 2017: (practice 7 due end of Wednesday 14th Nov)
- [W11] Tuesday 21 Nov 2017: (practice 8 due end of Wednesday 22nd Nov)
- [W12] Tuesday 28 Nov 2017: (practice 9 due end of Wednesday 29th Nov)
- [W13] Tuesday 5 Dec 2017: 3rd Quiz at start of class (practice 10 due end of Wednesday 6th Dec)
- [W13] Friday 8 Dec 2017: Classes End.

o Registrar's TimeTable (as of 11 Aug 2017):

- MC 17 Tu 7 - 10 pm

o Academic Calendar:

- Computer Science 4472A/B - Specification, Testing and Quality Assurance
- Concepts and state of the art techniques in software specification and quality assessment for software engineering; quality attributes; formal specification and analysis; verification and validation.
- Antirequisite(s): Software Engineering 4452A/B, Software Engineering 4453A/B.
- Prerequisite(s): Computer Science 3307A/B/Y.
- Extra Information: 3 lecture hours, 0.5 course.

o Senate regulation: Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites

o note: As a computer scientist, you should recognize the above as a case of patching flawed software (in this case the registrar's online enrollment software) with 'blame the user' policies. Hopefully you will never do anything like that in your future undertakings.

2. Instructor information: Robert E. Webber, MC384, webber@csd.uwo.ca (include course number in subject line), office hours on course announcements page and/or blog.

3. Course Syllabus

- o The goal of the course is to introduce students to modern software testing and quality assurance. This will be accomplished using practice tasks and quizzes. Ruby will be the main language for the course -- students are not required to have prior Ruby experience. The course material is relevant to

computer software in general, including web applications. There will be a variety of practice tasks to allow people specifically interested in web applications to practice on issues arising from them as well as to allow people not interested in web applications to practice on other tasks. Similarly, an effort will be made to create practice tasks for people who want to apply the course material to other languages available on the course computers (with the requirement that at least half the course practice time must be spent on the Ruby approach to these ideas to better understand the problems that arise from using non-Ruby systems). Course material will be made available on the course Confluence wiki and practice work handed in with Git to the course BitBucket Git repository (see course web page for relevant links). [Should the Atlassian software (Confluence and/or BitBucket) fail, we will back up to a course web page and paper reports as done in previous years]

- The grading scheme presented in the Methods of Evaluation section was created to encourage students to investigate the issues of this course.
- The course format is to have assigned readings (or occasionally videos) that are available from the web (augmented by Western's digital library collection). Readings will be discussed in class and on the course blog. Class itself will focus on discussion of the reading material and how it might be applied in practice. This course is more interested in code reading and testing than in code writing. Time allocation for the course is based on 3 hours a week of class meetings; 3 hours a week of reading; and 3 hours a week of practice of course material.

4. *Course Materials*

- The course will make use of plain text files, pdf files, html files, and youtube video files that are freely available on the web or, at least, available to UWO students through the online subscriptions maintained by the University library system (and accessible from off campus via the Library proxy server as well as from on campus using machines with UWO IP addresses). For help with the Library proxy server, see help desk at any campus Library.
- *Course web page:* The course web page can be found at: <http://www.csd.uwo.ca/Courses/CS4472a/> -- which is the same as <http://www.csd.uwo.ca/~webber/CS4472> . On it are links to this course outline and a link to the course blog and practice area. If needed, it will become a backup of material normally kept on the blog such as: the schedule of material to be covered in the course and any announcements. Marking is done on the assumption that people check the announcements page of the course web page and blog frequently, and in particular, before handing stuff in.

5. *Methods of Evaluation*

- *30% -- 10 Weekly Practices -- getting the reports done:* Meeting the basic requirements of properly handed in practice reports will earn 3% per week (note that the basic requirements require more than one practice report per week -- such reports being properly formatted git commit comments as discussed on the course wiki -- such reports are also supposed to be frequently pushed to the course BitBucket Git repository discussed on the course wiki).
- *49% -- 4 Practice Reviews -- quality assessment:* At four times during the practice period the reports will be read in more detail to ensure that the practice is being well recorded, useful, and learned from. Each review is cumulative, with a focus on the more recent reports. The reviews are:
 - 4% -- for the first practice
 - 10% -- for the first 4 practices
 - 15% -- for the first 7 practices
 - 20% -- for all 10 practices
- *21% -- 3 Quizzes:* There will be three quizzes during the semester. Each quiz counts for 7% of the course mark. The quizzes will start 10 minutes after the official start of class and a half hour will be available to complete them. People arriving late will not be given a quiz and so it will be counted as a missed quiz. If you cannot complete the quiz during the time allotted or need to leave the room before you are ready to hand in your quiz, then it counts as a missed quiz (you don't hand it in if it is not ready) and will be processed as such as indicated below. The quizzes will be "short-answer closed-book/notes no-calculator or electronics" quizzes. The questions and answers will be made

available prior to the previous class and the quiz will be a random sampling thereof with certain breadth restrictions to make the quizzes somewhat cumulative.

If one quiz is missed, its mark will be covered by the average of the subsequent quizzes. If two quizzes are missed and/or the last quiz is missed, a makeup will have to be scheduled in order to avoid receiving a 0 for the quiz. Makeup quizzes will be based on the list of class material relevant at the time the makeup is taken using a different random number seed to sample the list appropriately. Marks will go in on time (a week after the last class since we don't have a final -- if a makeup hasn't been arranged (and taken and marked) by then, a 0 for the material needed to be made up will be used to calculate the handed in mark with the makeup resulting in a mark change request placed into the system to get processed whenever the registrar's office gets around to it). Should it not be possible to schedule a mutually convenient time for the makeup prior to when the course marks are due, then the makeup will be the departmental default makeup time for a final exam for the semester of the course enrollment. Making up a missed makeup requires Dean's office judgement that the situation would have justified missing the scheduled makeup of a final exam.

People requiring special accommodation with SSD should contact the prof soonest as equivalent quizzes can be generated simply by using a different random seed, which would allow more flexibility than usual in scheduling SSD proctoring.

6. Additional Statements

- *Statement on Use of Electronic Devices:* The final exam will be closed book, closed notes, with no electronic devices allowed, with particular reference to any electronic devices that are capable of communication and/or storing information.
- *Statement on Use of Personal Response Systems:* Clickers will not be used in this class as it is nearly impossible to use them and protect student privacy, as any Computer Scientist should know.
- *Statement on Academic Offenses:* Scholastic offenses are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:
http://www.uwo.ca/univsec/academic_policies/appeals/scholastic_discipline_undergrad.pdf
- *Statement on Academic Offenses (graduate version):* Scholastic offenses are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf
- *Regarding Plagiarism-Checking Software:* Such software will not be used in this class as it is nearly impossible to use them and protect student privacy, as any Computer Scientist should know. In the case of both material handed in and tests and/or exams, any plagiarism checking will be done the old fashioned way, by a person looking at the material in question.
- *Senate regulation:* Students who are in emotional/ mental distress should refer to Mental Health @ Western <http://www.uwo.ca/uwocom/mentalhealth/>
- *Senate regulation:* For UWO Policy on Accommodation for Medical Illness and a downloadable SMC see: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf [downloadable Student Medical Certificate (SMC): <https://studentservices.uwo.ca/> under the Medical Documentation Heading] Students seeking academic accommodation on medical grounds for any missed tests, exams, participation components and/or assignments worth 10% or more of their final grade must apply to the Academic Counselling office of their home Faculty and provide documentation. Academic accommodation cannot be granted by the instructor or department.
- *Department specific information*
 - [CS Department Rules of Ethical Conduct](#)
 - [CS Department Specific Information on Scholastic Offences](#)

7. Specification for this document

- *course outline requirements*
- *requirements regarding undergrad evaluation*
- *requirements regarding scheduling of tasks*