The University of Western Ontario London, Canada

Department of Computer Science

CS 2212B - Introduction to Software Engineering Course Outline - Winter 2023

Course Description

The informal approaches that most individual programmers use when writing small programs do not work very well when applied to the development of large pieces of software and team programming situations. Software engineering is a discipline that applies principles of traditional engineering to improve software, as well as its development and maintainability.

In this course, we will examine the stages of the software engineering process, including requirements gathering, specification, design, implementation, and testing. We will also cover the practicalities of software engineering, covering a number of the key tools and technologies leveraged in successful endeavours. A large group project, completed by teams of students, will serve to reinforce concepts learned and give students practical experience developing software in a realistic work environment. Programming for this course will be done in Java.

The following list of topics may be covered, depending on time and the dynamics of the semester.

- Overview of software engineering
- Software processes and workflows
- Agile software development
- Software requirements gathering and modelling
- Software design concepts
- Implementation of software
- Testing and software quality management
- Managing software projects
- Enterprise-scale software and collaboration tools

Prerequisite Requirements

- Computer Science 2210a/b and 2211a/b
- Students are assumed to be familiar with the Java programming language

Antirequisites

• Software Engineering 2203A/B

Note: 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.

Instructor Information

Instructor: Dr. Daniel Servos

E-Mail: <u>dservos5@uwo.ca</u> (please include CS2212 in the subject of all e-mails)

Office: MC387

Office Hours: By Appointment

Book via: http://danielservos.ca/apt

Website: http://danielservos.ca

Office Hours

Instructor office hours must be booked 24 hours in advance using the above link. When booking an office hour, you should include a description of the topic you wish to discuss and any relevant files including a copy of any assignment, project, document, etc. that you wish to ask questions about.

E-Mail Contact

Students must use their Western (@uwo.ca) email addresses when contacting their instructor and include "CS2212" in the subject line of their e-mail. Failing to do this may result in your e-mail being marked as spam and not delivered properly. Every attempt will be made to answer all e-mails within two business days.

E-mails regarding personal matters and medical accommodations should be sent directly to the course instructor (dservos5@uwo.ca) and not a teaching assistant.

E-mails regarding assignment marking and regrading should first be addressed to the TA who marked your assignment and only to the course instructor if your discussion with the TA was not satisfactory.

Teaching Assistant Consulting

Teaching assistants will be available weekly for consulting periods. These sessions will be held in-person and the location, dates, and times for each will be listed on the OWL course site. The number of TA consulting sessions offered and the scheduling of each will depend on the number of teaching assistants assigned to the course and will be announced on the OWL course site once available.

A list of teaching assistants and their contact information will be posted to OWL once available.

Course Format

This format of this course will be in-person with readings assigned weekly from the textbook. Occasionally online resources will be assigned to review before class. These will be posted on and assigned through the OWL course site each Monday before 10AM.

Lecture Hours

- Tuesday 9:30 AM to 11:30 AM, MC-110
- Wednesday 10:30 AM to 11:30 AM, NSC-1

Students are expected to bring blank paper and writing utensils to class. Bringing a laptop is also highly encouraged to enable you to follow along with examples and tutorials.

Course Materials

Textbook

The following textbook is required and available for purchase <u>from the university bookstore</u> and other sources as both a physical book and eText:



Software Engineering: A Practitioner's Approach 9th Edition By Roger Pressman and Bruce Maxim ISBN10: 1259872971

ISBN13: 9781259872976 https://www.mheducation.com/highered/product/1259872971.html

Readings from this text will be assigned weekly on OWL. Additional free online references and suggested readings may also be provided throughout the course as the project requires them. Please check the course OWL website weekly for updates and more information.

Technology Requirements:

- Access to a modern personal computer running Windows or macOS.
- A webcam (can be built into a laptop).
- A microphone (can be built into a laptop).
- A reliable internet connection.

Course Site

The course website is located within OWL. To access the website, navigate to http://owl.uwo.ca and login with your Western University personal computer account (user id and password). All

course content, assigned readings, notes, assignments and class information will be posted to this site each week. You are responsible for checking the course site regularly.

If students need assistance with the course OWL site, they can seek support on the OWL Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Student Evaluation

Element	Weight
Group Project	50%
Participation	10%
Final Exam	40%

To be eligible to obtain a passing mark in the course, your final exam grade **must** be 40% or higher **AND your** overall group project grade must be 40% or higher. A maximum grade of 45% will be given if you do not satisfy these requirements.

To be eligible to receive a grade of C or higher, your mark on the final exam must be at least 50%, and **your** overall group project grade must be at least 50%. Otherwise, the maximum overall mark you can receive is 58%.

Final grades will be rounded to a whole number by truncating the decimal places (i.e. taking the floor of the decimal final grade such that a 89.56% becomes a 89%). All other grades will be rounded to two decimal places using conventional rounding rules (i.e. a digit less than five will be rounded down, a digit of 5 or more will be rounded up).

Group Project

All students are required to be an active participant in a term long group project that will involve the specification, design, and implementation of a reasonably large-scale software system, implemented using Java. While the project is a group project, grades will be assigned to each student based on both group and individual performance for each component. Individual performance will be based on a number of factors, some of which may include peer evaluations, contributions made during class, repository logs, individual reports of work completed, meeting minutes, individual performance during the project demonstration, and so on.

Details on the overall topic of the project will be posted to OWL by January 16th, with more details on each project component posted on the dates listed in the table below (these dates are tentative and subject to change). Any changes, updates, and clarifications to these descriptions

and dates will also be posted on the OWL website. It is your responsibility to monitor these pages closely.

Project Components (dates are tentative)

Component	Weight	Posted By	Due Date
		(at the latest)	(by 11:55PM)
Requirements Documentation	5%	January 23 rd	February 3 rd
Project Management	4%	January 23 rd	Ongoing, final submission April. 6 th
Peer Review (individual)	2%	January 23 rd	Ongoing, final submission April. 6 th
Design Documentation	10%	February 6 th	February 27 th
Implementation and Delivery	20%	February 6 th	Date of acceptance testing
			(Tentatively April 3 rd to 6 th)
Testing Documentation	9%	February 6 th	Date of acceptance testing
			(Tentatively April 3 rd to 6 th)

All dates listed above are tentative and subject to change.

If for any reason, the project schedule given above cannot be adhered to, the project marks will be pro-rated. The project components are worth 50% of the overall mark for the course. If a component must be cancelled for the whole class for any reason, the remaining project component weights will be pro-rated to add up to 50%.

Team Project

- You will be given the opportunity to form your own teams of 4 or 5. The deadline to do so is January 20th. After this date the instructors will decide on the composition of the teams. The instructors' decisions are final. The instructor will attempt to make sure that each team has at least 4 members and no more than 5 members.
- If an instructor created team has less than 4 members, this will be taken into consideration during marking of project components.
- If a team has less than 5 members, the instructor may add additional team members at their discretion up until January 27th.
- Individual students may submit a request to be taken out of the team to which they were assigned for a **good reason** (such as a prior conflict with one of the team members). Such requests must be made to the instructor before January 27rd and detail the good reason.

 No changes are allowed in team composition after January 27th.

Weekly Team Meetings

- Students are required to keep in contact and collaborate closely with their teammates through weekly meetings scheduled and organized by the team start after January 23rd.
- Weekly meetings may occur <u>in-person or virtually online</u> (e.g. using Zoom or MS Teams). They cannot be done solely through e-mail or a text only medium.
- Each team is required to write minutes of each meeting, listing date, time, attendance, what the topics of discussion in the meeting were, any decisions that were made, and which team members were assigned which tasks.
- A weekly meeting is not required on reading week.
- Weekly meetings cannot be held on holidays recognized by Western University.
- All team members are expected to attend these meetings.
- Failing to hold or properly document these meetings will impact the teams Project Management grade.

Weekly TA Meetings

- Teams are required to meet weekly in-person with their assigned TA to keep them apprised on the progress of the project, any concerns they may have, or issues the team may be facing.
- It is the team's responsibility to work with their assigned TA to arrange a time and place for these meetings.
- These meetings should be at most 20 minutes long.
- Teams must come prepared to each meeting and be able to present what progress has been made since the last meeting, any issues blocking their progress, and their plans for the upcoming week.
- All team members are expected to attend these meetings.
- These meetings will be part of the Team's Project Management grade.

Project Demonstration (Acceptance Testing)

• Project demonstrations will take place between April 3rd and April 6th. The exact dates and length of the presentation will be posted later in the term. This involves a short presentation by the team that demonstrates the team's finished implementation of the project, as well as answering questions about the process and design of their project. All team members must be present for the demonstration.

• Teams will sign up for a demonstration date/time that works for all team members. Open dates/times will be posted on OWL once available. Demonstrations are currently planned to take place in-person.

Submission

- All components must be type-written for legibility and to facilitate electronic submission.
 If components require the creation of diagrams or illustrations, these too must be done
 electronically. Appropriate tools will be discussed in class and in the descriptions of the
 components.
- You are required to submit each component electronically through OWL in addition to retaining a copy on the tools used (e.g. Confluence, Bitbucket, etc). If final submissions are too large for OWL submission, alternate arrangements will be made.
- We reserve the right to use similarity and metadata detection software to detect possible plagiarism cases.
- Components are expected to be individual efforts (where individual could also mean designated group in the case of a group project component). Any code that is borrowed from an existing source or book must be clearly identified as such in the appropriate documentation; otherwise, this may constitute a plagiarism offence.
- While discussion about the project is encouraged between groups, directly using code or copying from another group (including groups from past semesters) is strictly prohibited and a scholastic offence for all groups involved. Groups should not share any project components with other groups.
- Borrowing to large amounts of code from outside sources (even if it is properly identified) will lead to a reduced implementation component grade. You will only be granted marks on code your team writes and implements. If you have any doubt about how much is too much, please ask the course instructor for guidance.

Late Policy for Groupwork

- It is expected that groups budget enough time to properly submit their project components via OWL and allow for any unforeseen technological issues. Groups are expected to regularly backup their work and submit well before any deadline.
- Each group will be allocated 6 late coupons in total.
- Each late coupon allows a group to submit a project component one day late without penalty.
- At most 3 late coupons can be used per project component.
- If a group has no late coupons remaining or is late by more than 3 days, a zero grade will be assigned for that project component.

- No submissions will be accepted after April 10th at 11:55pm even if a team has late coupons remaining or extensions have been granted.
- Late coupons can only be used for project components done as a group and cannot be applied to the final exam, participation mark, or to move the date of the project demonstration.
- Late coupons cannot be stacked or combined with any other type of extension or accommodation unless discussed and approved in advance with the course instructor. In general, all late coupons must be used before accommodations are considered.

Late Policy for Individual Components

- Individual project components such as the peer-review components are subject to a 25% (of the total marks) late penalty per day late.
- Late coupons can **not** be used for individual components.
- After 3 days late, a zero mark will be given for the component.

Marking

- Project components will be initially marked by a teaching assistant assigned to the course to provide feedback and assign a provisionary grade for that project component to the whole group.
- This provisionary team grade will be reweighted for each individual team member at the end of the term based on the peer review, project demonstration, the various logs and records for the team (e.g. forum posts, use of Atlassian software, commits, etc.), meeting minutes, and how the project progressed since the component was submitted.
- It is expected that all team members contribute something to each project component. A team member who makes no contributions will be assigned a zero grade for that component at the end of the term.
- Every effort will be made to have project components marked by the teaching assistant and feedback provided within 3 weeks of the submission date, preferably sooner. If we are unable to comply with our intended return dates, revised dates will be posted on the course website and/or e-mailed to the class.
- A request for adjustment of the provisionary team grade returned by the teaching assistant must be made within 1 week of the date your project component was returned.
- Such a request must be first made to the teaching assistant who marked your project component. If your discussion with the teaching assistant was not satisfactory, you may submit it in writing (e-mail) to the course instructor. You must include the specific reasons why you believe you deserve more marks.
- Component marks may be posted periodically throughout the term through OWL. It is your responsibility to check that your marks have been recorded correctly.

• Individual grades on groupwork components will be based on the groups grade adjusted for the individual's performance and contributions. This adjustment will be made at the end of the course and accounted for in your final grade. It will be based on peer evaluations, repository logs, individual reports of work completed, meeting minutes, individual performance during the project demonstration, and so on.

Medical Illness or Serious Circumstances for Group Project Components

- Team members unable to complete group work must contact their group and the course instructor as soon as possible to inform them they will be unable to complete their assigned duties. Ideally within 24 hours when possible.
- If a team member is unable to complete work on a group component due to documented illness or other serious circumstances, they must work with their group to exchange responsibilities as soon as possible. For example, they may work with their group to do more on the next project component in exchange for the group taking over their responsibilities for the current component.
- It is expected that groups manage their late coupons appropriately to allow for any unforeseen illness or absences in their team.
- If further extensions (beyond those allowed by late coupons) is required, you must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. Extensions will only be granted if it is clear the team member worked with the team to exchange duties and all the maximum number of late coupons have already been used.

Use of Confluence, Jira, and Bitbucket

- It is expected that groups retain and work on all documents on the Confluence wiki site provided to each team and keep all code in the provided Bitbucket repository.
- All tasks assigned to group members and the tracking of bugs/issues should be done so through Jira.
- Failing to do this will impact the Team's Project Management grade.

Backups

It is your responsibility to keep up-to-date backups of all project components and project files in case of system crashes or inadvertently erased files. Retain copies of all material handed in, as well as the actual graded version, to guard against the possibility of lost components or errors in

recording marks. It is not safe to discard these materials until you are satisfied that your final mark for the course has been computed properly.

No extension or accommodation will be given for lost files or work. It is expected that teams back up their work as well as store it on Confluence and Bitbucket.

Participation

As Computer Science is a highly collaborative field, it is important to develop the skills and tools you need to work with others on complex programming and technical problems. For this reason, CS2212 makes heavy use of active learning and group work in in-class activities. It is expected that you will be an active participant in all course activities and come prepared by reading the required readings before class each week.

Participation will be tracked using "participation points" that are awarded for different activities that demonstrate engagement and participation in the course, aiding other students, completing in-class activities, answer questions in-class, or making meaningful contributions on the course forums.

The following are examples of activities that award participation points (other opportunities may be added at the instructor's discretion):

Activity	Participation Points	Description
Completing in-class activities.	10 to 100	In-class lectures may include a group work activity or tutorial section that asks you to work with a group to
activities.		complete a small poll, quiz, short written response, or
		other activity. Completing these (even if your answer is
		incorrect) will award points. These activities must be
		done in-class during the designated time and recorded
		through the http://cs1.ca tool. For full points a proper
		summary of the activity must be submitted through the
		tool. Most (but not necessarily all) weeks will have at
		least two activities worth 150 points in total.
Participation tickets	50	During in-class lectures the instructor may award
		participation tickets for answering a question out loud
		in-class or otherwise showing involvement in the
		lecture. These tickets will award 50 participation points
		if entered into the http://cs1.ca tool. Tickets must be
		entered into the tool within one week of being issued.
Answering questions in-	0 to 20	During in-class lectures the instructor may occasionally
class using the in-class		ask questions to the class. If you answer these
response tool.		questions via the http://cs1.ca tool, a small amount of
		participation points may be awarded based on the
		quality of your answer and the question being asked.
		Responses must be made in a reasonable time frame

		after the question is asked. At most 300 points can be
		earned from answering question this way.
Asking a meaningful	0 to 50	Asking a meaningful question on the course forums
question on the course		about the course content or assignments that is not
forums.		clearly answered elsewhere or already asked by
		another student. To count, the question must be posted
		in the correct section/subforum and asked in good faith
		(i.e. not to simply gain points). Most meaningful
		questions will be given 25 points on average depending
		on the quality. At most 300 points can be earned
		from asking/answering questions.
Answer a question on the	0 to 50	Answering an unanswered question posted by another
course forums.		student on the course forums in a meaningful way or
		significantly adding to an already answered question.
		To count, the answer must be posted in good faith. No
		points will be awarded to students working together to
		post/answer questions purely for points. Most
		meaningful answers will be given 25 points on average
		depending on the quality. At most 300 points can be
		earned from asking/answering questions.
Posting a new resource to	0 to 100	Posting links to free resources that cover topics
the course forums.		discussed in the course or go into additional depth
		about these topics. These resources must be posted to
		correct forum to count and must have not already been
		posted elsewhere (either by other students or
		mentioned by the instructor in the course resources).
		Most meaningful posts of resources will be given 25
		points on average depending on the quality and number
		of resources posted. At most 300 points can be
		earned from posting resources.
Posting a tutorial, you wrote	0 to 200	Posting a small practical tutorial about how to
your self.	0 10 200	accomplish some task in the software we are using.
your sen.		The tutorial may be text, image, or video based and not
		already covered in the course materials or posted by
		another student. The tutorial must be your own work
		and not copied from another source. If you use any
		resources from others, they must be properly cited.
		Most meaningful and high-quality tutorials will be
		given 100 points on average depending on the quality,
		length, effort put into the tutorial. At most 500 points
		can be earned from posting tutorials.

Participation points will be converted into percentage (out of 10%) to calculate your final participation mark using the following table:

Level	Grade (out of 10%)	Minimum Participation Points Required
0	0%	0
1	1%	300
2	2%	600

3	3%	900
4	4%	1000
5	5%	1200
6	6%	1500
7	7%	1800 (it should be possible to accumulate this many points from only inclass activities).
8	8%	1975
9	9%	2150
10	10%	2200 (it should be possible to accumulate this many points by completing all in-class activities, earning 4 participation tokens, and making 4 high quality forum posts. Many other combinations are also possible.).
11	10% + up to 2% bonus to final grade (depending on number of extra points past 2300), Final grade can not be over 100%.	2300

No fraction of percentages will be granted for participation. You must make it to the next level to increase your participation grade. For example, 1150 points would still be a level 4, worth 4%.

The final subjective decision of what constitutes a "meaningful contribution" or how may points are assigned for a contribution is at the sole discretion of the course instructor. Quantity of posts or contributions is not a substitute for quality and multiple low-quality contributions do not add up to one meaningful contribution.

If for any reasons the course must be moved online for a period of time, the in-class activities may be offered asynchronously online. In such a case, you may be required to have a webcam and microphone.

Course Forms

The course instructor will announce at the start of the term details about what constitutes the course forms, and what posts will count towards participation. Depending on the enrolment of the course and the tools available, this may not be the OWL forums, and could be an external service such as Stack Overflow Teams or another third-party service.

Missed In-Class Activities

Missed in-class activities can be made up for by making additional high-quality contributions on discussion forums, earning participation tickets, or answering questions via the http://csl.ca tool. As such, no accommodation will be given for missed class due to illness or other circumstances as a method to make up these missed activities is already available.

Disruptive Behaviour

In the instructor's sole discretion, participation points may be removed for disruptive in-class or online behaviour including but not limited to talking during inappropriate times, inappropriate comments, or failing to work well with other students during group work activities. Participation points may also be removed for attempting to "cheat" the participation system. For example, submitting in-class group work for students not in attendance or giving a participation ticket to a student that did not earn it. Spamming the discussion forums or the in-class response system with low quality posts purely to inflate your participation mark may also be penalized.

Final Exam

The final exam will be conducted in-person during the final exam period and covers all course material including assigned readings, tutorials, lectures, and material covered in the project. The exact date/time of the final exam will be scheduled by the Office of the Registrar and announced once available.

The format of the exam will be multiple choice, matching, short answer, and long answer questions.

The exam will be closed book, but students will be allowed to have a one-page handwritten cheat sheet (two sided and letter size).

The exam is to be completed individually, with no assistance from others, and following all rules listed on the cover sheet of the exam paper.

At the instructor's sole discretion, the final exam grades may be curved upwards or downwards to match historical averages and medians more closely. Should this be necessary all student's final exam grades will be curved identically, by adding or subtracting a fixed constant.

Student's absent from the final exam without approval from Academic Counselling will be given a zero grade for their final exam (this will result in a maximum overall final grade of 45%). See the section on student absences for details on approved final exam absences.

Contingency plan for an in-person class pivoting to 100% online learning

In the event of a COVID-19 resurgence or any other extraordinary situation that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, asynchronously (e.g., posted on OWL for students to view at their convenience). The grading scheme will not change. Any remaining project components (including the demonstrations and team/TA meetings) will also be conducted online as determined by the course instructor.

Depending on the nature of the pivot to online learning, some project component due dates or posting dates may need to be changed. Should this be the case, any changes will be announced by the course instructor as soon as possible.

In such a case, the final exam will be conducted online using Proctortrack and OWL, but the rules and weighting of the exam will remain the same. You will be required to have access to a webcam, microphone, and computer that meets Proctortrack's requirements. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide personal information (including some biometric data) and the session will be recorded. More information about this remote proctoring service is available in the Online Proctoring Guidelines at the following link:

https://www.uwo.ca/univsec/pdf/onlineproctorguidelines.pdf

Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. Information about the technical requirements are available at the following link:

https://www.proctortrack.com/tech-requirements/

Email

Occasionally email messages may be sent to the entire class or to students individually. Emails will be sent to your UWO email address as assigned to you by Information Technology Services (ITS). It is your responsibility to read this email on a frequent and regular basis.

You should note that email at the university and thru other providers have quotas or limits on the amount of space that is dedicated to each account. Unchecked email may accumulate beyond those limits and you may be unable to retrieve important messages from the university. Losing email is not an acceptable excuse for not knowing about the information that was sent.

Student Absences

If you are unable to meet a course requirement due to illness or other serious circumstances, you must provide valid medical or supporting documentation to the Academic Counselling Office of your Faculty of Registration as soon as possible. For further information, please consult the University's medical illness policy at

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf.

The Student Medical Certificate is available at

https://www.uwo.ca/univsec/pdf/academic policies/appeals/medicalform.pdf.

Absences from Final Examinations

If you miss the Final Exam, please contact the Academic Counselling office of your Faculty of Registration as soon as you are able to do so. They will assess your eligibility to write the Special Examination (the name given by the University to a makeup Final Exam).

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (e.g., more than 2 exams in 23-hour period, more than 3 exams in a 47-hour period).

If a student fails to write a scheduled Special Examination, the date of the next Special Examination (if granted) normally will be the scheduled date for the final exam the next time this course is offered. The maximum course load for that term will be reduced by the credit of the course(s) for which the final examination has been deferred. See the Academic Calendar for details (under Special Examinations).

Note: missed work can *only* be excused the mechanisms detailed above. Being asked not to attend an in-person course requirement due to potential COVID-19 symptoms is **not** sufficient on its own.

Accommodation and Accessibility

Religious Accommodation

When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at

https://multiculturalcalendar.com/ecal/index.php?s=c-univwo.

Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic Accommodation disabilities.pdf.

Academic Policies

The website for Registrarial Services is http://www.registrar.uwo.ca.

In accordance with policy,

https://www.uwo.ca/univsec/pdf/policies procedures/section1/mapp113.pdf,

the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at their official university address is attended to in a timely manner.

Scholastic offences 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_undergrad.pdf.

All required assignments/project components may be subject to submission for textual and metadata similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism or custom plagiarism detection software developed for this course. All assignments/project components submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the commercial service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

Computer-marked multiple-choice tests and exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Privacy Agreement

This course may make use of several third-party services and software packages that gather data for the evaluation of assignments/project components and participation. By taking this course you agree to the terms of service and privacy agreements of these services including:

Stack Overflow Teams: https://stackoverflow.com/legal/terms-of-service/public

Course Suite One: http://cs1.ca

Atlassian Services (Jira, Bitbucket, Confluence): https://www.atlassian.com/legal/cloud-terms-of-service

YouTube: https://www.youtube.com/static?template=terms

AhaSlides: https://ahaslides.com/privacy/

Plickers: https://help.plickers.com/hc/en-us/articles/360009090833-Privacy-Policy

Gradescope: https://www.gradescope.com/tos

Balsamiq: https://balsamiq.com/legal/privacy/

Furthermore, when using these services regarding this course you agree to protect your account and allow no other student or person to access it. Allowing another person to use your account to submit work on your behalf is a scholastic offence.

Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: https://www.uwo.ca/sci/counselling/.

Students who are in emotional/mental distress should refer to Mental Health@Western (https://uwo.ca/health/) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at

http://academicsupport.uwo.ca/accessible_education/index.html

if you have any questions regarding accommodations.

Learning-skills counsellors at the Student Development Centre (https://learning.uwo.ca) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Additional student-run support services are offered by the USC, https://westernusc.ca/services/.