Course Outline

School:	Eng. Tech. & Applied Science
Department:	Information and Communication Engineering Technology (ICET)
Course Title:	Software Development Project 1
Course Code:	COMP 231
Course Hours/Credits:	56
Prerequisites:	COMP 228, COMP 229, COMP 246
Co-requisites:	N/A
Eligible for Prior Learning, Assessment and Recognition:	Yes
Originated by:	A. Donin, G. Leitch
Creation Date:	Winter 2014
Revised by:	Hao Lac
Revision Date:	Summer 2023
Current Semester:	Fall 2025
Approved by:	ppesikan c/o

Predrag Pesikan, Associate Dean/Dean,
Eng. Tech. & Applied Science

Students are expected to review and understand all areas of the course outline.

Retain this course outline for future transfer credit applications. A fee may be charged for additional copies.

This course outline is available in alternative formats upon request.

Acknowledgement of Traditional Lands

Centennial is proud to be a part of a rich history of education in this province and in this city. We acknowledge that we are on the treaty lands and territory of the Mississaugas of the Credit First Nation and pay tribute to their legacy and the legacy of all First Peoples of Canada, as we strengthen ties with the communities we serve and build the future through learning and through our graduates. Today the traditional meeting place of Toronto is still home to many Indigenous People from across Turtle Island and we are grateful to have the opportunity to work in the communities that have grown in the treaty lands of the Mississaugas. We acknowledge that we are all treaty people and accept our responsibility to honor all our relations.

Course Description

This is the capstone course for Software Engineering Technician program and the first software development project course for all software engineering technology programs. The students are required to work in teams to design, implement, and document an application or a component for a hypothetical organization. This enables the student to simulate the activities of the software engineering processing using a variety of collaborative tools used in the computer industry.

External Standard Information (ESI)

N/A

Program Outcomes

Successful completion of this and other courses in the program culminates in the achievement of the Vocational Learning Outcomes (program outcomes) set by the Ministry of Colleges and Universities in the Program Standard. The VLOs express the learning a student must reliably demonstrate before graduation. To ensure a meaningful learning experience and to better understand how this course and program prepare graduates for success, students are encouraged to review the Program Standard by visiting http://www.tcu.gov.on.ca/pepg/audiences/colleges/progstan/. For apprenticeship-based programs, visit https://www.skilledtradesontario.ca/about-trades/trades-information/.

Course Learning Outcomes

The student will reliably demonstrate the ability to:

1. Gather requirements for the proposed system.
2. Analyze and estimate the requirements using appropriate Agile methodologies.
3. Apply Agile methods and if applicable, non-Agile methods to solve design and implementation issues.
4. Design and utilize the appropriate database structures and tools.
5. Code and test the application.
6. Produce both user and system documentation.
7. Document the programming aspects of a system.
8. Produce timely and accurate reports on project status.
9. Demonstrate and defend the project produced in this course.

Essential Employability Skills (EES)

The student will reliably demonstrate the ability to*:

1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience.
2. Respond to written, spoken, or visual messages in a manner that ensures effective communication.
4. Apply a systematic approach to solve problems.
5. Use a variety of thinking skills to anticipate and solve problems.
6. Locate, select, organize, and document information using appropriate technology and information systems.
7. Analyze, evaluate, and apply relevant information from a variety of sources.
9. Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.
10. Manage the use of time and other resources to complete projects.
11. Take responsibility for one's own actions, decisions, and consequences.

**There are 11 Essential Employability Skills outcomes as per the Ministry Program Standard. Of these 11 outcomes, the following will be assessed in this course.*

New Essential Skills (NES)

N/A

Global Citizenship and Equity (GC&E) Outcomes

N/A

Methods of Instruction

Class discussions and independent work.

Text and Other Instructional/Learning Materials

The costs of textbooks or other learning material are available through the Centennial College Bookstore https://www.bkstr.com/centennialprogressstore/shop/textbooks-and-course-materials.

Text Book(s):

Cohn, Mike. 2004. User Stories Applied: For Agile Software Development, Addison-Wesley Professional.

ISBN-10: 0321205685

ISBN-13: 978-0321205681

Online Resource(s):

Team collaboration focused tools.

Custom Courseware:

Project dependent.

Please see the weekly topical outline for any Additional Learning Resources required for your section of this course.

Evaluation Scheme

- User Roles: Identify and consolidation of user roles.
- User Stories: Generate user stories for the system.

- Release Planning: Create a release plan.
- Iteration Planning: Create an iteration plan per iteration.
- Measuring, Monitoring, and Electronic Maintenance of Project: Create tables to monitor project progress and enhance team collaboration using a software project management system.
- Release 1.0: Production code meets the project requirements with test code. All related document that supports the code-base.
- Peer Evaluation: Peer evaluation focused on team building skills.
- Technical Report: Produce a final Technical Report as required by TAC.

Evaluation Name	CLO(s)	EES Outcome(s)	NES Outcome(s)	GCE Outcome(s)	Weight/ 100
User Roles	1, 2, 6	1, 2, 4, 5, 6, 7, 9, 10, 11			10
User Stories	1, 2, 3, 6, 8	1, 2, 4, 5, 6, 7, 9, 10, 11			20
Release Planning	1, 2, 3, 6, 8	1, 2, 4, 5, 6, 7, 9, 10, 11			10
Iteration Planning	1, 2, 3, 6, 8	1, 2, 4, 5, 6, 7, 9, 10, 11			15
Measuring, Monitoring, and Electronic Maintenance of Project	1, 2, 3, 6, 7, 8	1, 2, 4, 5, 6, 7, 9, 10, 11			5
Release 1.0	2, 3, 4, 5, 6, 7, 8, 9	1, 2, 4, 5, 7, 9, 10, 11			15
Peer Evaluation	8, 9	9, 10, 11			5
Technical Report	6, 7	2			20
Total					100%

If students are unable to write a test they should immediately contact their professor or program Associate Dean for advice. In exceptional and well documented circumstances (e.g. unforeseen family problems, serious illness, or death of a close family member), students may be able to write a make-up test.

All submitted work may be reviewed for authenticity and originality utilizing College approved plagiarism prevention software. Students who do not wish to have their work submitted to College approved plagiarism prevention software must, by the end of the second week of class, communicate this in writing to the instructor and make mutually agreeable alternate arrangements.

When writing tests, students must be able to produce official Centennial College photo identification or they may be refused the right to take the test or test results will be void.

Tests or assignments conducted remotely may require the use of online proctoring technology where the student’s identification is verified and their activity is monitored and/or recorded, both audibly and visually through remote access to the student's computer and web camera. Students must communicate in writing to the instructor as soon as possible and prior to the test or assignment due date if they require an alternate assessment format to explore mutually agreeable alternatives.

Student Accommodation

The Centre for Accessible Learning and Counselling Services (CALCS) (http://centennialcollege.ca/calcs) provides programs and services which empower students in meeting their wellness goals, accommodation and disability-related needs. Our team of professional psychotherapists, social workers,

educators, and staff offer brief, solution-focused psychotherapy, accommodation planning, health and wellness education, group counselling, psycho-educational workshops, adaptive technology, and peer support. Walk in for your first intake session at one of our service locations (Ashtonbee Room L1-04, Morningside Room 190, Progress Room C1-03, The Story Arts Centre Room 285, Downsview Room 105) or contact us at calcs@centennialcollege.ca, 416-289-5000 ext. 3850 to learn more about accessing CALCS services.

Use of Dictionaries

- Any dictionary (hard copy or electronic) may be used in regular class work.

Program or School Policies

N/A

Course Policies

Meetings with the instructor to discuss project related issues will be done openly and transparently with all team members present. Exceptionality to the foregoing policy would be due to medical or personal family related issues with supporting documentation.

For deliveries with a video workshop requirement, absence from his/her team's video workshop (to be scheduled by team), will result in a zero for the entire deliverable in question. Arriving late to a video workshop will result in a 50% deduction for the entire deliverable in question.

Late Policy: A 2% marks reduction will apply for each day late on any assessment. The reduction will not exceed the weight of the assessment in the final grade.

College Policies

Students should familiarize themselves with all College Policies that cover academic matters and student conduct.

All students and employees have the right to study and work in an environment that is free from discrimination and harassment and promotes respect and equity. Centennial policies ensure all incidents of harassment, discrimination, bullying and violence will be addressed and responded to accordingly.

Academic Honesty

Academic honesty is integral to the learning process and a necessary ingredient of academic integrity. Forms of academic dishonesty include cheating, plagiarism, and impersonation, among others. Breaches of academic honesty may result in a failing grade on the assignment or course, suspension, or expulsion from the college. Students are bound to the College’s AC100-11 Academic Honesty and Plagiarism policy.

To learn more, please visit the Libraries information page about Academic Integrity https://libraryguides.centennialcollege.ca/academicintegrity and review Centennial College's Academic

Honesty Module:
https://myappform.centennialcollege.ca/ecentennial/articulate/Centennial_College_Academic_Integrity_Module_%202/story.html

Use of Lecture/Course Materials

Materials used in Centennial College courses are subject to Intellectual Property and Copyright protection, and as such cannot be used and posted for public dissemination without prior permission from the original creator or copyright holder (e.g., student/professor/the College/or third-party source). This includes class/lecture recordings, course materials, and third-party copyright-protected materials (such as images, book chapters and articles). Copyright protections are automatic once an original work is created, and applies whether or not a copyright statement appears on the material. Students and employees are bound by College policies, including AC100-22 Intellectual Property, and SL100-02 Student Code of Conduct, and any student or employee found to be using or posting course materials or recordings for public dissemination without permission and/or inappropriately is in breach of these policies and may be sanctioned.

For more information on these and other policies, please visit www.centennialcollege.ca/about-centennial/college-overview/college-policies.

Students enrolled in a joint or collaborative program are subject to the partner institution's academic policies.

PLAR Process

This course is eligible for Prior Learning Assessment and Recognition (PLAR). PLAR is a process by which course credit may be granted for past learning acquired through work or other life experiences. The PLAR process involves completing an assessment (portfolio, test, assignment, etc.) that reliably demonstrates achievement of the course learning outcomes. Contact the academic school to obtain information on the PLAR process and the required assessment.

Semester:	Fall 2025	Professor(s) Name:	See Luminate course shell
Section Code:	ALL	Contact Information:	See Luminate course shell
Meeting Time & Location:	See mycentennial	Delivery Method:	Online

Topical Outline (subject to change):

ORIGINAL TOPICAL

Week	Topics	Readings/Materials	Weekly Learning Outcome(s)	Instructional Strategies	Evaluation Name and Weight	Evaluation Date
1	Introduction, Project Plan, User Roles, TAC Technical Report	Chapters 1, 3, 5 (Cohn), TAC Technical Report	-Develop high-level project description. -Apply user role modeling and the user proxy for selecting the project customer. -Understand how to use collaborative tools to facilitate team communication and development. -TAC Technical Report	Class discussions Independent work		Week 1
2	Introduction, Project Plan, User Roles	Chapters 1, 3, 5 (Cohn), TAC Technical Report	-Develop high-level project description. -Apply user role modeling and the user proxy for selecting the project customer. -Understand how to use collaborative tools to facilitate team communication and development. -TAC Technical Report	Class discussions Independent work		Week 2
3	User Stories (Writing and Gathering)	Chapters 2, 4 (Cohn)	-Writing stories. -Develop user stories using appropriate method(s). -Update TAC Technical Report.	Class discussions Independent work	User Role Modelling Due (10%)	Week 3
4	User Stories (guidelines for good stories), Acceptance Testing user stories, Estimating stories	Chapters 6, 7, 8 (Cohn)	-Guidelines for writing good stories. -Acceptance Testing for user stories. -Estimate user stories based on a metric proposed by the team. -Update TAC Technical Report.	Class discussions Independent work		Week 4
5	Planning a Release, Constraints, Bugs, User Stories and the User Interface	Chapters 9, 16 (Cohn)	-Use themes per release. -Prioritize user stories (and constraints) into iterations. -Select an iteration length and the velocity. -Create the release plan -Handling non-functional requirements -Stories for bugs	Class discussions Independent work		Week 5

Week	Topics	Readings/Materials	Weekly Learning Outcome(s)	Instructional Strategies	Evaluation Name and Weight	Evaluation Date
			-Update TAC Technical Report.			
6	Planning an Iteration, Progress Monitoring	Chapter 10, 11 (Cohn), https://www.youtube.com/watch?v=U8GBXvdmHT4	-Disaggregate stories into tasks -Accepting responsibilities -Estimate tasks -Basics of Version Control (Git) -Understand how to create tables showing changes and progress of user story development by the entire development team. -Update TAC Technical Report.	Class discussions Independent work	User Stories Gathering Due (20%)	Week 6
7	1st Release, Iteration 1, Planning an Iteration, Acceptance Test Writing, User Stories, Refactoring Code	Chapters 2, 4, 6, 7, 8, 9, 10, 11 (Cohn)	-Estimate user stories based on a metric proposed by the team. -Use themes per release. -Prioritize user stories (and constraints) into iterations. -Disaggregate stories into tasks -Accepting responsibilities -Estimate tasks -Acceptance Test writing -Monitor and update progress of task and user story development. -Refactoring code -TAC Technical Report revision.	Class discussions Independent work	Release Plan for Release 1.0 Due (10%)	Week 7
8	1st Release, Iteration 1, Acceptance Test Writing, User Stories, Refactoring Code	Chapters 2, 4, 6, 7, 8, 9, 10, 11 (Cohn)	-Acceptance Test writing -Monitor and update progress of task and user story development. -Refactoring code -TAC Technical Report revision.	Class discussions Independent work	Iteration 1 Plan Due (7.5%)	Week 8
9	1st Release, Iteration 1, Acceptance Test Writing, Acceptance Testing User Stories, Refactoring Code	Chapters 2, 4, 6, 7, 8, 9, 10, 11 (Cohn)	-Acceptance Test writing -Monitor and update progress of task and user story development. -Acceptance Testing user stories. -Refactoring Code -TAC Technical Report revision.	Class discussions Independent work		Week 9
10	1st Release, Iteration 2, Planning an Iteration, Acceptance Test Writing, User Stories, Refactoring	Chapters 2, 4, 6, 7, 8, 9, 10, 11 (Cohn)	-Estimate user stories based on a metric proposed by the team. -Use themes per release. -Prioritize user stories (and constraints) into iterations. -Disaggregate stories into tasks	Class discussions Independent work	Progress Monitoring (2.5%)	Week 10

Week	Topics	Readings/Materials	Weekly Learning Outcome(s)	Instructional Strategies	Evaluation Name and Weight	Evaluation Date
	Code		-Accepting responsibilities -Estimate tasks -Acceptance Test writing -Monitor and update progress of task and user story development. -Refactoring code -TAC Technical Report revision.			
11	1st Release, Iteration 2, Acceptance Test Writing, User Stories, Refactoring Code	Chapters 2, 4, 6, 7, 8, 9, 10, 11 (Cohn)	-Acceptance Test writing -Monitor and update progress of task and user story development. -Refactoring code -TAC Technical Report revision.	Class discussions Independent work	Iteration 2 Plan Due (7.5%)	Week 11
12	1st Release, Iteration 2, Acceptance Testing User Stories, Refactoring Code	Chapters 2, 4, 6, 7, 8, 9, 10, 11 (Cohn)	-Acceptance Testing user stories. -Monitor and update progress of task and user story development. -Refactoring Code -TAC Technical Report revision.	Class discussions Independent work	Progress Monitoring (2.5%)	Week 12
13	1st Release Demo, TAC Technical Report	Chapters 2, 4, 6, 7, 8, 9, 10, 11 (Cohn)	-Software Release 1.0 Demo -Acceptance Testing user stories. -TAC Technical Report revision.	Class discussions Independent work	Software Release 1.0 Due including Demo, Production and Test code (15%)	Week 13
14	Peer Evaluation, TAC Technical Report	N/A	-Peer evaluation (dimensions) -TAC Technical Report (finalize)	Class discussions Independent work	Peer Evaluation (5%), and TAC Technical Report (20%)	Week 14