

CS 450: Software Process Management

School of Technology and Computing

5 Credits, Undergraduate Course
Spring 2021

*Access to the Internet is required.
All written assignments must be in Microsoft-Word-compatible formats.
See the library's APA Style Guide tutorial for a list of resources that can help you use APA style.*

Faculty Information

Professional experience information for instructors is found under *Faculty Information* in the online course menu.

Contact Information

Contact information for instructors is found under *Faculty Information* in the online course menu.

Course Description

This course focuses on software process models and software project management, including Continuous Quality Improvement (CQI), Agile, Capability Maturity Model Integration (CMMI), and People Capability Maturity Model (PCMM). These concepts illustrate how to assess the current state of software development and provide practice in how to improve and manage the software development process using standards systematically. Both the improvement of the software development process and the capability of software professionals will also be covered.

This course will prepare and position the students to participate in complex process improvement initiatives as well as offer involvement opportunities in the development of quality assurance frameworks in their workplace.

Course Resources

Required and recommended resources to complete coursework and assignments are found on the course [Reading List](#). The reading list can be found under *Course Information* in Blackboard as well as from the library homepage (“Find Your Textbook” button).

Note: Required resources that must be purchased by the student are tagged “Purchase from a vendor of your choosing.” Required resources with a direct link, “Available through CityU Library”, are available electronically at no cost to students.

Students in Canada may purchase course resources from the [Canada Bookstore](#), and students outside the U.S. and Canada should contact their advisor or textbook coordinator for additional information.

Course Outcomes

At the end of the course students will:

- Understand key elements of common software development methodologies and process models.
- Apply agile software development practices to manage, organize, and control the changes during the Software Development Life Cycle.
- Apply the results of requirements engineering to architecture design.

- Analyze processes in terms of the capability maturity model (CMM) and capability maturity model integrated (CMMI) types, uses, and expected content of common software documentation.
- Evaluate the application of software process improvement models and metrics to measure and estimate aspects of software engineering.
- Create the testing, quality assurance, and traceability requirements for a software project.

Additional Information

Topics covered <added by the instructor>

Grading Scale

The grades earned for the course will be calculated using City University of Seattle’s decimal grading system, found in the current University Catalog (<https://www.cityu.edu/catalog/>).

Grading rubrics with details on how each assignment will be graded are located under *Assignments* and/or in *My Grades* in the online course menu. Students should review the rubric for each assignment prior to completing their work in order to understand how it will be assessed.

OVERVIEW OF REQUIRED ASSIGNMENTS	% OF FINAL GRADE	POINTS
The Muddiest Point (MP)	5%	50 = 5 points* 10 modules
Concept Test (CT)	5%	50 = 5 points* 10 modules
Discussion Board (DB)	10%	100 = 10 points* 10 modules
Hands-On Practice (HOP)	20%	200= 20 points* 10 modules
Independent Project (IP)	30%	300= 30 points * 10 modules
Knowledge Check (KC)	10%	100= 10 points * 10 modules
Team Project (TP)	20%	Proposal: 30 points Progress: 70 points Final Report: 70 points Final PPT: 30 points Subtotal: 200 points
TOTAL	100%	1,000 points

Specifics of Course Assignments

The instructor will provide grading rubrics that will provide more detail as to how this assignment will be graded.

The Muddiest Point (MP)

Before class, students are required to submit the Muddiest Point (MP) activity. The purpose of this activity is to stimulate student engagement. The instructor uses the MP to assess how

students understood the required readings. The instructor also uses the MP to customize the lecture scope to implement Just-in-Time Teaching (JiTT). The MP consists of writing a brief reflective essay (<= 50 words) identifying the most confusing part (i.e., the MP) of the content covered in the upcoming module. If a student understood all concepts, the student needs to explain the most exciting aspect. There is one multiple-choice question from the required reading to demonstrate that the student understood the required readings.

Criteria	% of Grade
Participation	40%
Writing	40%
Correctness	20%
TOTAL	100%

Concept Test (CT)

The instructor poses a problem based on key concepts of a lecture. After reflecting on the problem, students submit their response and the instructor review them without providing a correct answer. Students discuss their thought process and solution with a peer. Students then commit to an answer and re-submits their responses. Instructor reviews responses and thought processes with the correct answer.

Criteria	% of Grade
Engagement	100%
TOTAL	100%

Discussion Board (DB)

All classes are required to use the Discussion Board. Participation through DB is an integral part of this course. It is defined as active engagement in a discussion or other activity. Instructors will determine the type of activities and their due dates; moreover, different DB activities will have different substance and length guidelines. The instructor will provide specific instructions to students.

A student posts an answer to a weekly discussion topic in Discussion Board. The student also posts a response to two other students' posts by the end of each module. Comments and questions should be clear and thoughtful, with correct grammar, spelling, and punctuation. The instructor will grade the quality of your discussion postings on both content and response.

Questions or comments specifically for the instructor should be emailed directly to the instructor or posted in the Question and Answer Forum. Students who want to talk with other students about issues unrelated to the discussion forums should use the Coffee Talk Forum.

Although the tone of your DB postings can be informal, your instructor will expect the content to be on a professional level. Your comments and questions for discussion should be clear and thoughtful, with correct grammar, spelling, and punctuation. As with written assignments, the quality of your discussion postings will be graded on both content and presentation.

Criteria	% of Grade
Participation	50%
Writing	50%
TOTAL	100%

Hands-on Practice (HOP)

The instructor will assign Hands-on Practice exercises to a pair of students in class or individually online. Students pair up and practice exercises to learn specific programming languages, application programming interfaces (APIs), or tools related to the programming assignments or virtual labs.

Criteria	% of Grade
Practice Exercise	80%
Engagement	20%
TOTAL	100%

Independent Project (IP) Report: <instructor title>

Description

<Instructor briefly describes the project>

An independent project requires each student to analyze an instructor-approved topic and its requirement, design a system or component based on the given subject, implement the designed system, and test the system. The paper must be no less than 3-4 pages, excluding the title and reference pages, using APA format, with at least five (5) recent, scholarly/non-scholarly, peer- or non-peer-reviewed references. As in any academic writing, students should not merely copy information from another author, but use evidence to support the contentions they have drawn from their findings and critically analyze related literature. Each paper needs to be an analytical paper, not a summary of readings.

Criteria	% of Grade
Structure	20%
Content	30%
Development	20%
Writing	20%
Reference	10%
TOTAL	100%

Team Project (TP)

Teams consist of three to four students. Each team will use an instructor-approved topic relevant to the course.

The paper is to be between 6 and 7 pages. The required template for class submissions comes from international organizations, the Education Special Interest Group and the Computing Education + Information systems Applied Research. ([EDSIG/CONISAR](#)). The instructor may

recommend teams submit their paper to conferences. Submissions are optional and will not impact the course grade. Additional revisions may be required after the course.

Three report templates and one presentation template are provided. The file name consists of team project number, team number, and the list of your team members. For example, “TP01 T03 Sam John Mark.

- TP01 for the proposal - “TP01 T0X Author1 Author2 Author3.docx”
- TP02 for the progress report - “TP02 T0X Author1 Author2 Author3.docx”
- TP03 for the final report - “TP03 T0X Author1 Author2 Author3.docx”
- TP04 for the final presentation slide - “TP04 T0X Author1 Author2 Author3.pptx”

As in any scholarly writing, students should not merely copy information from another author. Students should use evidence to support the contentions they have drawn from their findings and critically analyze related literature. In essence, each paper needs to be an analytical paper, not a summary of readings.

In addition, a team presentation slide is required.

- The presentation consists of 15+4 slides: 15 slides for content and 4 slides for cover, agenda, key reference, and Q&A.
- The PPT template is provided. Your team can change design and color for your team’s purpose.
- If necessary, a presentation video (15 minutes) may be requested.
- If necessary, a demo video (a maximum of 1-2 minutes) may be requested. But, the demo time should be included in the total presentation time (15 minutes).

Four submissions are required according to the following schedule:

- Proposal (1 page; 30 points) - Starting (Module 1) & Ending (Module 3)
- Progress Report (3-4 pages; 70 points; graded after the proposal has been submitted) - Starting (Module 4) & Ending (Module 7)
- Final Report (6-7 pages; 70 points; graded after the progress has been submitted) - Starting (Module 8) & Ending (Module 10)
- Final PPT (15+4slides, 30 points; graded after the final report has been submitted) - Starting (Module 8) & Ending (Module 10)

Project Description:

Team Project (TP) Report

The student will provide a report formatted based on a template provided by the instructor. Students are required to improve the writing iteratively and incrementally every week. The revision will always happen during a quarter. Students will add new required sections to the existing paper every week.

The final report is the culmination of applied research and activities conducted throughout the quarter. The final report/paper provides a detailed problem and its solution likely to be encountered by a company or organization described in a case study supplied by the student.

TP01 and TP02 Grading scale

Criteria	% of Grade
Structure	20%
Content	30%
Writing	30%
Reference	10%

Collaboration	10%
TOTAL	100%

TP03 Grading scale

	Criteria	Outcome	% of Grade
General Computing Knowledge (20%)			
1	Software Process Management	Integrate a Software Management Process for interactive applications.	20%
Critical Thinking (60%)			
2	Issue	Issue is stated and described thoroughly so that it is understood fully.	20%
3	Evidence	Information is taken from source(s) appropriate to the scope with enough interpretation and evaluation to develop a comprehensive analysis or synthesis, and expert opinions are thoroughly scrutinized.	10%
4	Context and Awareness	Thoroughly analyzes assumptions and biases, carefully evaluating contextual relevance when presenting a position.	20%
5	Conclusions	Conclusions are logical and reflect an informed evaluation of evidence and perspectives in priority order.	10%
Collaboration (20%)			
6	Teamwork	Works effectively on diverse, global and/or distributed teams.	10%
7	Knowledge of Cultural Frameworks	Demonstrates sophisticated understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.	5%
8	Openness to Cultural Differences	Demonstrates sophisticated understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.	5%
	TOTAL		100%

Team Project (TP) Presentation

The student will report on the research outcomes, development, or other project efforts to an academically appropriate committee in a public forum. The nature of the presentation content will determine the specific makeup of the audience. The student will choose the format of the presentation, in consultation with the advisor. The layout and design must be appropriate and adequate to represent the outcomes of the effort. While students must make some form of a visual presentation, the presentation of the results may include publishing in a refereed publication, publication in a trade or popular magazine or journal, broadcast in an appropriate medium, or, in exceptional cases, limited dissemination within a closed community.

Each presenter will have 15 minutes for presentation and 5 minutes for questions and answers. Each presenter must keep the total presentation time limit strictly.

Criteria	% of Grade
Structure	20%
Visual Presentation	30%
Verbal Quality & Engagement	30%
Team Collaboration	20%
TOTAL	100%

Students are expected to use the assigned readings, videos, and other materials throughout the quarter. Students will need to utilize additional sources that were not assigned by the professor. While stylized after an industry report, nonetheless, students are expected to employ APA formatting of citations, footnotes, and bibliography. Students must cite the sources of all ideas, facts, and information used that are not their own, even if they have put the information into their own words. Failure to do so is plagiarism, although the oversight is unintentional. To avoid plagiarism, check <https://library.cityu.edu/howto/apa-writing/avoid-plagiarism/>.

Course Policies

Course policies on topics such as Late Assignments, Participation, and Professional Writing are found under Course Information in the online course menu. Students are responsible for reviewing and applying these policies while enrolled in this course.

University Policies

Students are responsible for understanding and adhering to all of City University of Seattle's academic policies. The most current versions of these policies can be found in the [University Catalog](#) that is linked from the CityU Web site.

Non-Discrimination & Prohibition of Sexual Harassment

City University of Seattle adheres to all federal, state, and local civil rights laws prohibiting discrimination in employment and education. The University is committed to ensuring that the education environment is bounded by standards of mutual respect and safety and is free from discriminatory practices.

In the U.S., the University is required by Title IX of the Education Amendments of 1972 to ensure that all of its education programs and activities do not discriminate on the basis of sex/gender. Sex include sex, sex stereotypes, gender identity, gender expression, sexual orientation, and pregnancy or parenting status. Sexual harassment, sexual assault, dating and domestic violence, and stalking are forms of sex discrimination, which are prohibited under Title IX and by City University of Seattle policy. City University of Seattle also prohibits retaliation against any person opposing discrimination or participating in any discrimination investigation or complaint process internal or external to the institution. Questions regarding Title IX, including its application and/or concerns about noncompliance, should be directed to

the Title IX Coordinator. For a complete copy of the policy or for more information, visit <https://my.cityu.edu/titleix> or contact the Title IX Coordinator.

In Canada, in compliance with the British Columbia Human Rights Code, the Alberta Human Rights Act, WorksafeBC, and the Workers' Compensation Board of Alberta, the University believes that its environment should at all times be supportive and respectful of the dignity and self-esteem of individuals. Discrimination, harassment and bullying conduct, whether through person to person behaviour or via electronic communications such as email or social media is not acceptable and will not be tolerated. As an educational institution, it is our responsibility to cultivate an environment of excellence, equity, mutual respect and to recognize the value and potential of every individual. The University will take all necessary steps to meet or exceed the requirements of the law to prevent discrimination, harassment and bullying. The Respectful Workplace Policy for the prevention of discrimination, harassment and bullying policy and procedure can be found at <https://www.cityu.edu/discover-cityu/about-cityu/> under the Policies section or at <https://www.cityuniversity.ca/about/>.

Religious Accommodations

City University of Seattle has a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The University's policy, including more information about how to request an accommodation, is available in the University Catalog and on the my.cityu.edu student portal. Accommodations must be requested by the 20% mark of this course (e.g. day 14 of a ten-week course, day 7 of a 5-week course) using the Religious Accommodations Request Form found on the student dashboard in the my.cityu.edu student portal.

Academic Integrity

Academic integrity in students requires the pursuit of scholarly activity that is free from fraud, deception and unauthorized collaboration with other individuals. Students are responsible for understanding CityU's policy on academic integrity and adhering to its standards in meeting all course requirements. A complete copy of this policy can be found in the [University Catalog](#) under *Student Rights and Responsibilities* on the page titled *Academic Integrity Policy*.

Attendance

Students taking courses in any format at the University are expected to be diligent in their studies and to attend class regularly.

Regular class attendance is important in achieving learning outcomes in the course and may be a valid consideration in determining the final grade. For classes where a physical presence is required, a student has attended if they are present at any time during the class session. For online classes, a student has attended if they have posted or submitted an assignment. A complete copy of this policy can be in the [University Catalog](#) under *Student Rights and Responsibilities* on the page titled *Attendance*.

Final Assignment Due Date

Final assignments for each class at CityU must be due on or before the final date of the course as indicated in the university's course information system. Due dates that extend beyond the final date of the course may negatively impact tuition funding for students.

Support Services

Disability Services Accommodations Statement

Students with a documented disability who wish to request academic accommodations are encouraged to contact Disability Support Services to discuss accommodation requests and eligibility requirements. Please contact Disability Support Services at disability@cityu.edu or 206.239.4752 or visit the [Disability Support Services](#) page in the my.cityu.edu portal. Confidentiality will be observed in all inquiries. Once approved, information about academic accommodations will be shared with course instructors.

Library Services

CityU librarians are available to help students find the resources and information they need to succeed in this course. Contact a CityU librarian through the [Ask a Librarian](#) service, or access [library resources and services online](#), 24 hours a day, seven days a week.

Smarthinking Tutoring

CityU students have access to free online tutoring offered through Smarthinking, including writing support, from certified tutors 24 hours a day, seven days a week. Contact CityU's Student Support Center at help@cityu.edu to request a user name and password.

Rubrics for IS 450

The Muddiest Point (MP) Rubric

Description

Before class, students are required to submit the Muddiest Point (MP) activity. The purpose of this activity is to stimulate student engagement. The instructor uses the MP to assess how students understood the required readings. The instructor also uses the MP to customize the lecture scope to implement Just-in-Time Teaching (JiTT). The MP consists of writing a brief reflective essay (<= 50 words) identifying the most confusing part (i.e., the MP) of the content covered in the upcoming module. If a student understood all concepts, the student needs to explain the most exciting aspect. There is one multiple-choice question from the required reading to demonstrate that the student understood the required readings.

Rubric Detail

100%	Levels of Achievement			
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Criteria	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Undergraduate Percentage Scale	0%-57.49%	57.50%-76.24%	76.25%-93.74%	93.75%-100%
Participation Weight 30%	No submission	Late submission	On-time submission	On-time submission
Writing Weight 40%	No submission. Submission states the concept without explanation and shows grammatically incorrect in many places.	Submission states the concept without justification and shows partially grammatically correct.	Submission clearly states the concept and justifies why the topic was exciting or clearly explains what the student could not understand.	In addition, the submission is 50 words or less and shows critical thinking.
Citation Weight 10%	Does not include quote or citation.	Quote is included but the citation is incorrect or does not expand on the represented idea.	Quote is included with correct citation. The quote helps to explain the represented idea.	Quote is included with correct citation. The quote expands upon and explain the represented idea.
Correctness Weight 20%	Submission does not answer the questions correctly or fails to answer the question.	Submission does not answer the questions correctly or fails to answer the question.	Submission answers the questions correctly.	Submission answers the questions correctly.

Discussion Board (DB) Rubric

Description

A student posts an answer to a weekly discussion topic in Discussion Board. The student also posts a response to two other students' posts by the end of each module. Comments and questions should be clear and thoughtful, with correct grammar, spelling, and punctuation. The instructor will grade the quality of your discussion postings on both content and response.

Rubric Detail

100%	Levels of Achievement			
Criteria	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Undergraduate	0%-57.49%	57.50%-76.24%	76.25%-93.74%	93.75%-100%
Participation Weight 50%	Submission does not post answer and responses.	Submission answers the question and posts responses to only one student.	Submission answers the question and posts response to two students.	Submission answers the question with references and posts responses to more than two students.
Writing Weight 50%	No submission.	Submission posts responses with spelling errors, grammar errors, and punctuations.	Submission is coherent with only two spelling or grammar errors.	Submission is coherent and grammatically correct with no errors.

Concept Test (CT) Rubric

Description

The instructor poses a problem based on key concepts of a lecture. After reflecting on the problem, students submit their response and the instructor review them without providing a correct answer. Students discuss their thought process and solution with a peer. Students then commit to an answer and re-submits their responses. Instructor reviews responses and thought processes with the correct answer.

Rubric Detail

100%	Levels of Achievement			
Criteria	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Undergraduate Percentage Scale	0%-57.49%	57.50%-76.24%	76.25%-93.74%	93.75%-100%
Engagement Weight 100%	Submission does not show an answer or shows an answer without justification.	Submission shows an answer with justification, but there is no peer	Submission includes an answer, justification, and peer engagement.	Submission includes an answer, justification, and peer engagement

		student engagement.		with critical thoughts.
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Hands-on Practice (HOP) Rubric

Description

The instructor will assign Hands-on Practice exercises to a pair of students in class or individually online. Students pair up and practice exercises to learn specific programming languages, application programming interfaces (APIs), or tools related to the programming assignments or virtual labs.

Rubric Detail

100	Levels of Achievement			
Criteria	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Undergraduate Percentage Scale	0%-57.49%	57.50%-76.24%	76.25%-93.74%	93.75%-100%
Practice Exercise Weight 80%	Submission does not show answers or shows answers without evidence.	Submission shows answers with minimal evidence.	Submission shows answers with some evidence.	Submission shows answers with full evidence.
Engagement Weight 20%	Student does not engage in the exercise.	Student engages minimally in the exercise.	Student engages fully in the exercise.	Student mentors the other student to learn and succeed.

Independent Project (IP) / Research Paper (RP) Rubric

Description

The independent project deliverable is a research paper; each student will use an instructor approved topic relevant to the course. The paper must be no less than 3-4 pages, excluding the title and reference pages, using APA format, with at least 5 recent, scholarly, peer-reviewed references. As in any scholarly writing, students should not merely copy information from another author, but use evidence to support the contentions they have drawn from their findings and critically analyze related literature - each paper needs to be an analytical paper, not a summary of readings.

Students must cite the sources of all ideas, facts, tables, images, figures, formulas and

information used that are not their own, even if they have put the information into their own words. Failure to do so is plagiarism, even if the oversight is unintentional. Papers must be in compliance with the University's academic integrity policy, as described in the university catalog.

Rubric Detail

100%	Levels of Achievement			
Criteria	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Undergraduate Percentage Scale	0%-57.49%	57.50%-76.24%	76.25%-93.74%	93.75%-100%
Structure Weight 20%	Does not utilize template format.	Sometimes adheres to template, falls short or exceeds page count.	Frequently adheres to template. Follows page count.	Displays mastery of template qualities, able to fit formulated ideas and diagrams into template.
Content Weight 40%	Student does not use resources or evidence to support the topic, or those used are not relevant or scholarly. Information used is summarized or generalized rather than analyzed.	Student uses a limited range of resources and evidence to support topic, some of which lack relevance and scholarship. Interpretation or application of how the evidence supports the topic is lacking or generalized.	Student incorporates an appropriate variety of relevant scholarly resources and evidence to support almost every point. Student provides some interpretation and explanation of how the evidence supports the topic.	Student incorporates an appropriate variety of relevant scholarly resources and evidence to support every point. Student provides full interpretation and explanation of how the evidence supports the topic.
Writing Weight 30%	Ideas are unclear, lack detail, and/or random. Paper/presentati	Writing contains spelling, punctuation, and/or grammatical	Writing contains spelling, punctuation, and/or grammatical	Writing is almost entirely free of spelling, punctuation, and/or

	on has no or minimal organization. Ideas appear to be arranged in a random order. Few or inappropriate transitions between paragraphs/ideas, and ideas are not developed clearly. Does not appropriately respond to the assignment.	errors that may temporarily confuse the reader, but do not generally impede the overall understanding. Sentence structure is generally correct, but may be wordy, unfocused, repetitive, or confusing. There is some use of relatively vague, general, or inappropriate words.	errors, but these do not impede understanding. Sentences are generally clear, well structured, and focused, but some may be awkward or ineffective. Usually uses words accurately and effectively, but sometimes may be too general.	grammatical errors. Sentences are varied, clearly structured, carefully focused, and fit assignment's purpose and audience. Words chosen for their precise meaning and an appropriate level of specificity is used.
Reference Weight 10%	More than 10 errors in APA document formatting (including: punctuation, capitalization, title page, numbers, use of abbreviations, biased language, pronoun errors, headers/footers, levels of heading).	Between 5 and 10 errors in APA document formatting (including: punctuation, capitalization, title page, numbers, use of abbreviations, biased language, pronoun errors, headers/footers, levels of heading).	Between 0 and 4 errors in APA document formatting (including: punctuation, capitalization, title page, numbers, use of abbreviations, biased language, pronoun errors, headers/footers, levels of heading).	No errors in APA document formatting (including punctuation, capitalization, title page, numbers, use of abbreviations, biased language, pronoun errors, headers/footers, levels of heading).

Knowledge Check (KC) Rubric

Description

Weekly quizzes measure knowledge concepts acquired. Focus on the underlying principles and concepts rather than memorization to solve the quizzes.

Rubric Detail

100%	Levels of Achievement			
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Criteria	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Undergraduate Percentage Scale	0%-57.49%	57.50%-76.24%	76.25%-93.74%	93.75%-100%
Correctness Weight 100%	Answers none or 57.49% less of the questions correctly.	Answers 57.50% above or 76.24% less of the questions correctly.	Answers 76.25% above or 93.74% less of the questions correctly.	Answers 93.75% above or all the questions correctly.

Team Project (TP) Report Rubric

Description

Use this rubric for TP01 and TP02 only. The student will provide a report formatted based on a template provided by the instructor. Students are required to improve the writing iteratively and incrementally every week. The revision will always happen during a quarter. Students will add new required sections to the existing paper every week.

Rubric Detail

100%	Levels of Achievement			
Criteria	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Undergraduate Percentage Scale	0%-57.49%	57.50%-76.24%	76.25%-93.74%	93.75%-100%
Structure Weight 20%	Does not utilize template format.	Sometimes adheres to template, falls short or exceeds page count.	Frequently adheres to template. Follows page count.	Displays mastery of template qualities, able to fit formulated ideas and diagrams into template.
Content Weight 30%	Student does not use resources or evidence to support the	Student uses a limited range of resources and evidence to support topic,	Student incorporates an appropriate variety of relevant	Student incorporates an appropriate variety of relevant

	topic, or those used are not relevant or scholarly. Information used is summarized or generalized rather than analyzed.	some of which lack relevance and scholarship. Interpretation or application of how the evidence supports the topic is lacking or generalized.	scholarly resources and evidence to support almost every point. Student provides some interpretation and explanation of how the evidence supports the topic.	scholarly resources and evidence to support every point. Student provides full interpretation and explanation of how the evidence supports the topic.
Writing Weight 30%	Ideas are unclear, lack detail, and/or random. Paper/presentation has no or minimal organization. Ideas appear to be arranged in a random order. Few or inappropriate transitions between paragraphs/ideas, and ideas are not developed clearly. Does not appropriately respond to the assignment.	Writing contains spelling, punctuation, and/or grammatical errors that may temporarily confuse the reader, but do not generally impede the overall understanding. Sentence structure is generally correct, but may be wordy, unfocused, repetitive, or confusing. There is some use of relatively vague, general, or inappropriate words.	Writing contains spelling, punctuation, and/or grammatical errors, but these do not impede understanding. Sentences are generally clear, well structured, and focused, but some may be awkward or ineffective. Usually uses words accurately and effectively, but sometimes may be too general.	Writing is almost entirely free of spelling, punctuation, and/or grammatical errors. Sentences are varied, clearly structured, carefully focused, and fit assignment's purpose and audience. Words chosen for their precise meaning and an appropriate level of specificity is used.
Reference Weight 10%	More than 10 errors in APA document formatting (including: punctuation, capitalization, title page,	Between 5 and 10 errors in APA document formatting (including: punctuation, capitalization, title page,	Between 0 and 4 errors in APA document formatting (including: punctuation, capitalization, title page,	No errors in APA document formatting (including punctuation, capitalization, title page, numbers, use of

	numbers, use of abbreviations, biased language, pronoun errors, headers/footers, levels of heading).	numbers, use of abbreviations, biased language, pronoun errors, headers/footers, levels of heading).	numbers, use of abbreviations, biased language, pronoun errors, headers/footers, levels of heading).	abbreviations, biased language, pronoun errors, headers/footers, levels of heading).
Collaboration Weight 10%	Disengaged, misses deadlines, and fails to support team.	Minimally contributes to team effort. Contributes when asked.	Performs tasks as assigned, on time.	Completes all material on or ahead of time. Assists other team members, leads activities, and picks up unfinished tasks.

The final report (TP03) is the culmination of applied research and activities conducted throughout the quarter. The final report/paper provides a detailed problem and its solution likely to be encountered by a company or organization described in a case study supplied by the student.

Rubric for TP03

Context and Purpose (Writing)	Demonstrates minimal attention to context, audience, purpose, and to the assigned task(s) (e.g., expectation of instructor or self as audience).	Demonstrates awareness of context, audience, purpose, and to the assigned task(s) (e.g., begins to show awareness of audience's perceptions and assumptions).	Demonstrates adequate consideration of context, audience, and purpose and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).	Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.
Content Application (Writing)	The information is fragmented and/or used inappropriately (misquoted, taken out of context, incorrectly paraphrased,	Communicates and organizes information from sources. The information is not yet synthesized so the intended	Communicates, organizes and synthesizes information from sources. Intended purpose is achieved.	Communicates, organizes and synthesizes information from sources to fully achieve a specific purpose with clarity and depth.

	etc...), so the intended purpose is not achieved.	purpose is not fully achieved.		
Organization (Structure)	Organizational pattern (specific introduction and conclusion, sequenced material within the artifact, and transitions) is not observable.	Organizational pattern (specific introduction and conclusion, sequenced material within the artifact, and transitions) is intermittently observable.	Organizational pattern (specific introduction and conclusion, sequenced material within the artifact, and transitions) is clearly and consistently observable.	Organizational pattern (specific introduction and conclusion, sequenced material within the artifact, and transitions) is clearly and consistently observable and is skillful and cohesive.
Source and Evidence (Reference)	Demonstrates an attempt to use sources to support ideas.	Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline.	Demonstrates consistent use of credible, relevant sources to support ideas that are relevant within the discipline.	Demonstrates skillful use of high quality, credible, relevant sources to develop ideas that are relevant for the discipline.
Language (Writing)	Language choices are unclear, not appropriate to the audience, and minimally support the work presented.	Language choices are commonplace, not appropriate to Language and partially support the work presented.	Language choices are thoughtful, appropriate to the audience, and generally support the effectiveness of the work presented.	Language choices are imaginative, memorable, appropriate to the audience, and compelling and enhance the effectiveness of the work presented.

Team Project (TP) Presentation Rubric

Description

The student will report on the research outcomes, development, or other project efforts to an academically appropriate committee in a public forum. The nature of the presentation content will determine the specific makeup of the audience. The student will choose the format of the presentation, in consultation with the advisor. The layout and design must be appropriate and adequate to represent the outcomes of the effort. While students must make some form of a visual presentation, the presentation of the results may include publishing in a refereed

publication, publication in a trade or popular magazine or journal, broadcast in an appropriate medium, or, in exceptional cases, limited dissemination within a closed community.

Each presenter will have 15 minutes for presentational and 5 minutes for questions and answers. Each presenter must keep the total presentation time limit strictly.

Rubric Detail

100%	Research Paper - Levels of Achievement			
Criteria	Below Standard	Approaching Standard	At Standard	Exceeds Standard
Undergraduate Percentage Scale	0%-57.49%	57.50%-76.24%	76.25%-93.74%	93.75%-100%
Structure Weight 20%	Does not utilize template format.	Sometimes adheres to template, falls short or exceeds page count.	Frequently adheres to template. Follows page count.	Displays mastery of template qualities, able to fit formulated ideas and diagrams into template.
Visual Presentation Weight 30%	High text content, no visual pictures, spelling errors, relies on slide for presentation	Reading slides, little visual content, spelling errors diagrams, pictures, engaging material	Slides contain written info without errors, some visual content, elaborated upon by presenter	Visually appealing, minimal words all spelled correctly, innovative designs, animation
Verbal Quality & Engagement Weight 30%	Monotone, reads from slides, goes significantly over or under presentation time. No eye contact.	Wordy, mumbles, relies on slides to prompt presentation. Minimal eye contact.	Relies on slides, explain wording on slides to present. Good tonal modulation. Good eye contact.	Uses slides to give visual cues to presentation. Well prepared, cohesive verbiage. Engaging presenter uses eye contact and voice modulation.
Collaboration Weight 20%	Disengaged, misses deadlines, and	Minimally contributes to team effort.	Performs tasks as assigned, on time.	Completes all material on or ahead of time.

	fails to support team.	Contributes when asked.		Assists other team members, leads activities, and picks up unfinished tasks.
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