

ELI 9200 Section 002 – Engineering Planning & Project Management

COURSE OUTLINE Summer 2022

DESCRIPTION

This graduate level course is an introduction to the most widely accepted project management practices in the workforce today. It is based upon the guide published by the Project Management Institute known as “The Project Management Body of Knowledge” – or PMBOK. Project Management lends itself to being taught properly in either one of two ways. It can either be analyzed sequentially across the five phases of a project (initiating, planning, executing, monitoring and controlling, and closing) or it can be decomposed into its 12 areas of necessary expertise for the professional practitioner and then introduced to the student. We choose this second approach. We do so for several reasons, not least of which is that this is in keeping generally with the order in which most scholarly works tackle the subject. The course content for which the student is responsible, is developed in the software package “Storyline” by Articulate Ltd. The curriculum is designed to be delivered in Owl for online sections or it can be applied in person in a classroom setting. The student will note numerous enhancements to the course curriculum in part to compensate for semi-synchronous instruction methodology when we do teach the course online. As we are in class this semester, students may choose to engage these gamified elements, or they may wish to forgo this. Besides gamification, students will note video guest lecturing from well-known campus leaders throughout. An instructor will be available via email, and messenger at all times throughout the course. Response times in this regard will vary but in general students should not have to wait more than 48 hours for any enquiries. The course is to be delivered in synchronicity. Students will be allowed a limited amount of flexibility in proceeding through the course at their own pace lecture wise, but all assessments are completed to a consistent group timing. We will meet weekly for lectures. The final exam format is still to be determined but will likely be either an infinitely variable online mixed / multiple choice exam, or it will be an in person intramural mixed / multiple choice event. The course will be 9 weeks in duration followed by a final assessment during the intersession examination period.

PREREQUISITES

A student being in good standing with the Masters in Engineering program is the only requisite.

FINANCIAL OBLIGATIONS

The case study applied in the Major Assignment costs each student ~\$4.50 Cdn.

TOPIS

Topic #	Description	Learning Activities	Tentative timeline
1	Introduction to Project Management	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material • One gamified summary quiz 	Week 1
2	Project Life Cycle and Organization	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material • One gamified summary quiz • Reflection: Leadership 	Week 1
3	Project Management Processes	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material • One gamified summary quiz • Reflection: Organizational structure 	Weeks 2
4	Integration Management	<ul style="list-style-type: none"> • One Storyline lecture • One gamified summary quiz • Gamified assignment 	Week 2
5	Scope Management	<ul style="list-style-type: none"> • One Storyline lecture • One gamified summary quiz • Reflection: well-managed scope 	Week 3
6	Time Management	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material • One gamified summary quiz • Gamified assignment 	Week 4

7	Cost Management	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material • One gamified summary quiz • Gamified assignment 	Week 5
8	Special Topics: Agile & LEED	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material 	Week 6
9	Communication Management	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material • Voice thread peer review 	Week 7
10	Human Resource Management	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material • Gamified assignment • Reflection: PEO & PMI 	Week 7
11	Risk Management	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material 	Week 8
12	Procurement Management	<ul style="list-style-type: none"> • One Storyline lecture • Additional reading material • Gamified assignment 	Week 8

Lecture / Tutorial Schedule Section 002

Date	Time	Hours (nominal)
Wednesday, June 15, 2022	1:00 pm – 3:00 pm	3
Wednesday, June 22, 2022	1:00 pm – 3:00 pm	3
Wednesday, June 29, 2022	1:00 pm – 3:00 pm	3
Wednesday, July 6, 2022	1:00 pm – 3:00 pm	3
Wednesday, July 13, 2022	1:00 pm – 3:00 pm	3
Wednesday July 20, 2022	1:00 pm – 3:00 pm	3
Wednesday July 27, 2022	1:00 pm – 3:00 pm	3
Wednesday August 3, 2022	1:00 pm – 3:00 pm	3
<i>EXAM Date</i>	Wednesday August 10, 2022	
Total Synchronous Teaching Hours		24

Please note: Additional **OPTIONAL** Tutorials **MAY** be added. If this is done, the instructor will ensure that **ALL** students have availability. This may necessitate multiple offerings of these events.

Lectures will not be filmed. Students should attend all lectures to make sure they fully understand the context of the materials.

SPECIFIC LEARNING OUTCOMES

Degree Level Expectation	Weight	Assessment Tools	Outcomes
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Depth and breadth of knowledge	30%	<ul style="list-style-type: none"> • Assignments 2 & 3 • Major Assignment • Mid Term • Final Assessment • ComPAIR 	<ul style="list-style-type: none"> • Understanding of computational and/or empirical methodologies to solve project management problems. • Articulate a knowledge of, and understand what activities are required during project initiating, planning, executing, controlling, and closing. • Attain familiarity and confidence with the management of integration, cost, time, scope, quality, human resources, risk, and communication on projects.
Research & scholarship	5%	<ul style="list-style-type: none"> • Assignment 1 	<ul style="list-style-type: none"> • Apply themselves and foster in others an appreciation for project management best practices in the carrying out of academic scientific research.
Application of knowledge	30%	<ul style="list-style-type: none"> • Major Assignment 	<ul style="list-style-type: none"> • Ability to apply knowledge in a rational way to analyze a particular problem • Ability to use coherent approach to design a particular engineering system using existing design tools
Professional capacity / autonomy	5%	<ul style="list-style-type: none"> • Assignment 1 • Major Assignment 	<ul style="list-style-type: none"> • Awareness of academic integrity - Turnitin • Ability to implement established procedures and practices in the coursework related to APA citations • Understands what is expected of a professional engineer from a professional project manager. • Understands the roles and responsibilities of a professional project manager.
Communication skills	15%	<ul style="list-style-type: none"> • Major Assignment • Assignment 1 • ComPAIR 	<ul style="list-style-type: none"> • Ability to communicate (oral and/or written) ideas, issues, results and conclusions clearly and effectively. • Apply in themselves and foster in others an appreciation for project management best practices in the workplace.
Awareness of limits of knowledge	15%	<ul style="list-style-type: none"> • Assignments 1,2,3 • Major Assignment • ComPAIR 	<ul style="list-style-type: none"> • Clearly communicates the difference between a process and a project and thereby knows when to apply project management practices. • Understands and practices the commonly accepted professional standards of project management.

ASSESSMENTS

Assessment Type	Material Covered	Tentative Due Date(s)	Weight
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Homework Assignments (three)	Units 1 through 7	May 22, 2022 June 5, 2022 June 19, 2022	21%
Major Assignment in 5 phases (one)	Units 1 through 12	June 26, 2022	20%
Term tests (one)	Units 1 through 7	Friday June 10 th online	14%
“Com Pair” Reflective Exercises	Units 1 through 12	Sundays at midnight	15%
Final Assessment	Units 1 through 12	Tentative July 4.	30%

Activities in which collaboration is permitted:

As a general statement, all assessments in this course are to be completed independently. However, some informal collaboration among classmates is tolerated so long as it is restricted to reflective discussion with one another, or if it is related to the development of skills necessary for completing an activity. Examples are provided below to mitigate any ambiguity in that statement:

- Assignments 1 through 3
 - An example of a tolerable collaboration would be evidence of discussing the leadership skills of individuals in cases provided to test if a classmate has the same impression as you the student in question.
 - An example of an intolerable collaboration would be evidence of copying one another’s calculations related to a crashing, resource levelling, learning curve, net present value, or other Right/Wrong summative questions as might be possible for example in one of your 3 individual assignments.
- The Major Assignment
 - An example of tolerable collaboration between students would be evidence of one student having a discussion with a student from another group regarding the perspective of the group members on both teams related to the case.
 - An example of intolerable collaboration between students would be evidence of joining a website where information is shared across many class groups and either providing or receiving information on such sites.

Activities in which students must work alone (collaboration is not permitted):

- The mid term
- The final assessment

CONTACT INFORMATION:

Course instructor: Dr. David McKenna DPM, PMP , CSM

Email address: dmckenn4@uwo.ca

Contact policy:

- Contact instructor via email (above) or (less desirably) through messages in OWL
- Office hours are held via Zoom or following class. Allow 24 hours advance notice in request.
- A general FAQ section on the 'forums' section of OWL will be used for students to pose course-related questions so that all have the same information.
- All correspondences will receive a reply.

REQUIRED TEXTBOOK

Project Management – The Managerial Process – Larson & Gray 8th edition – McGraw Hill
ISBN: 978-1-260-57043-4 (Mandatory e-book or bound copy)

The Project Management Body of Knowledge (PMBOK) – 6th edition – PMI
ISBN: 978-1628251845 (Mandatory e-book or paperback)

OPTIONAL COURSE READINGS

All optional readings are uploaded to the Owl site.

COURSE CONTENT

The lecture notes and online lecture videos are copyrighted to the instructor and legally protected. Do not post these videos and lecture notes on any other website or online forums. The recording of the live/synchronous sessions of the course without the permission from the instructor is prohibited. The illegal posting and sharing of the copyrighted course content could be subjected to legal actions.

CHEATING, PLAGIARISM/ACADEMIC OFFENCES

Academic integrity is an essential component of learning activities. Students must have a clear understanding of the course activities in which they are expected to work alone (and what working alone implies) and the activities in which they can collaborate or seek help; see information above under “Assessments” and ask instructor for clarification if needed. Any unauthorized forms of help-seeking or collaboration will be considered an academic offense. University policy states that cheating is an academic offence. If you are caught cheating, there will be no second warning. Students must write their essays and assignments in their own words. Whenever students take an idea or a passage of text from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations.

Plagiarism is a major academic offence. Academic offences are taken seriously and attended by academic penalties which may include expulsion from the program. Students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence (see Western's scholastic discipline regulations for graduate students).

SYNCHRONOUS LEARNING ACTIVITIES

Students are expected to participate in synchronous learning activities as outlined in the course syllabus and/or described by the instructor. If you have issues that will impede your ability to participate in synchronous activities, please discuss with the course instructor at the beginning of the course.

CONDUCT ONLINE – IF the course migrates online for COVID or other reasons

Students are expected to follow proper etiquette during synchronous and asynchronous activities to maintain an appropriate and respectful academic environment. Any student who, in the opinion of the instructor, is not appropriately participating in the synchronous and asynchronous learning activities and/or is not following the rules and responsibilities associated with the online learning activities, will be reported to the Associate Dean (Graduate) (after due warning has been given). On the recommendation of the Department concerned, and with the permission of the Associate Dean (Graduate), the student could be debarred from completing the assessment activities in the course as appropriate.

HEALTH/WELLNESS

As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several health and wellness related services (remotely accessible) to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. Information regarding health- and wellness-related services available to students may be found at <http://www.health.uwo.ca/>.

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. Campus mental health resources may be found at http://www.health.uwo.ca/mental_health/resources.html <https://www.uwo.ca/health/psych/index.html>

SICKNESS

Students should immediately consult with the Instructor (for a particular course) or Associate Chair (Graduate) (for a range of courses) if they have problems that could affect their performance. The student should seek advice from the Instructor or Associate Chair (Graduate) regarding how best to deal with the problem. Failure to notify the Instructor or the Associate Chair (Graduate) immediately (or as soon as possible thereafter) will have a negative effect on any appeal. Obtaining appropriate documentation (e.g., a note from the doctor) is valuable when asking for accommodation due to illness.

ACCESSIBILITY

Please contact the course instructor if you require 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 661-2111 x 82147 or http://academicsupport.uwo.ca/accessible_education/index.html, for any specific question regarding an accommodation.

DOCUMENT CONTROL

Rev 00 – Originally released to students upon publication of the course in Owl April 24th, 2022.