

**Western University - Faculty of Engineering
Department of Civil and Environmental Engineering**

**CEE 9568b – Environmental Impact Assessment for Water Resources Projects
Course Outline – Summer 2021**

COURSE OUTLINE

DESCRIPTION

To understand environmental impact assessment and Class EA processes applied to water resources engineering projects and the interdisciplinary nature of water resources engineering to protect water resources and the environment. To learn the effects of water resources projects on natural heritage, natural hazard, and social or economic environment.

PREREQUISITES

Basic knowledge of water resources engineering including hydrology and hydraulics.

TOPICS

Detailed Tentative Schedule for the course is uploaded to OWL. The excel spreadsheet outlines details of the course schedule and topics to be covered etc.

Date	Tentative Timeline	Material Provided	Topics Description
May 7, 2021	Week of May 7	<ul style="list-style-type: none"> • Recorded lectures 	Introduction, Terminology and History
	Week of May 12	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	
	Week of May 14	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	Major impact on water resources projects,
	Week of May 19	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	
	Week of May 21	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	The need for environmental assessment, objective, and Policy framework
	Week of May 26	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	
	Week of May 28	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	Policy, institutional and legal framework,
June 2, 2021	Week of June 2	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	The environmental impact assessment process,
	Week of June 4	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	Municipal Class EA.
	Week of June 9	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	
	Week of June 11	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	Scoping and public participation,
	Week of June 16	<ul style="list-style-type: none"> • Recorded lectures • Live help session 	Monitoring and audits

	Week of June 18	<ul style="list-style-type: none"> Recorded lectures Live help session 	Project Presentations
	Week of June 25	<ul style="list-style-type: none"> Online Presentation 	Final Exam

***The date for the final exam will be confirmed and communicated through OWL.**

The course material will be delivered through live synchronous online lecture via zoom every Friday from 4:30 pm to 7:30 pm and Wednesday from 2:00 pm t 5:00 pm only from May 12 to June 16.

The first section of the weekly synchronous online class will be live lecture. The lecture slides will be uploaded to OWL before the lecture. The second section of the weekly synchronous online lecture via zoom will be used for tutorials where term projects and assignments will be discussed.

The lecture slides will be uploaded to OWL before the lecture. The recorded lecture materials will be uploaded to OWL after the class.

SPECIFIC LEARNING OUTCOMES EVALUATION

Degree Level Expectation	Weight	Assessment Tools	Outcomes
Depth and breadth of knowledge	20%	<ul style="list-style-type: none"> Assignments Course Project Quizzes Exam 	<ul style="list-style-type: none"> Understanding of advanced concepts and theories Awareness of important current problems in the field of study
Research & scholarship	20%	<ul style="list-style-type: none"> Assignments Course Project 	<ul style="list-style-type: none"> Ability to conduct critical evaluation of current advancements in the field of specialization Ability to conduct coherent and thorough analyses of complex problems using established techniques/principles and judgment
Application of knowledge	20%	<ul style="list-style-type: none"> Assignments Course Project 	<ul style="list-style-type: none"> Ability to apply knowledge in a rational way to analyze a problem Ability to use coherent approach to design an engineering system using existing tools
Professional capacity / autonomy	20%	<ul style="list-style-type: none"> Assignments Course Project 	<ul style="list-style-type: none"> Awareness of academic integrity Ability to implement established procedures and practices in the coursework Defends own ideas and conclusions Integrates reflection into his/her learning process
Communication skills	20%	<ul style="list-style-type: none"> Course Project Project Presentation 	<ul style="list-style-type: none"> Ability to communicate (oral and/or written) ideas, issues, results, and conclusions clearly and effectively

ASSESSMENTS

The final course grade will be based on the assessment of the student in the following subcategories:

Assessment Type	Material Covered	Tentative Due Date	Weight
Assignments	See excel table uploaded to OWL.	Approximately one assignment per two weeks due in two weeks.	20%
Course Project	See project detail document and project list uploaded under the project Tab in OWL.	Due by June 18, 2021	20%
Project Presentation	Project report	Due by June 18, 2021	10%
Quizzes	Topics covered before the quizzes	Approximately every three weeks	20%
Final Exam	Open book written exam completed while remote proctoring via Zoom.	June 25, 2021	30%

Activities in which collaboration is permitted:

Collaboration is allowed in the following activities:

- Course project
Collaboration is allowed within group members but not outside your group.
- Project Presentation
Collaboration is allowed within group members but not outside your group

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

Collaboration is not permitted in the following activities and the students must work alone:

- Assignments
- Final Exam
- Oral Exam

CONTACT INFORMATION

Dr. Imtiaz Shah, FEC, P.Eng.

Adjunct Professor

Department of Civil and Environmental Engineering

ishah5@uwo.ca

Contact policy:

- Contact instructor via email (above) or through messages in OWL

- Weekly Office hours will be held through Zoom as required.

REQUIRED TEXTBOOK

Class notes and reference materials.

OPTIONAL COURSE READINGS

1. Environmental Impact Assessment: Practice and Participation By Kevin S. Hanna;
2. Environmental Impact Assessment of Irrigation and Drainage Projects, By T. C. Dougherty, A. W. Hall; and
3. Case Study Reports

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.

ONLINE PROCTORING NOTICE

The final examination in this course will be conducted using Zoom. You will be required to keep your camera on for the entire session, hold up your student card for identification purposes, and share your screen with the invigilator if asked to do so at any time during the exam. The exam session will not be recorded.*

More information about the use of Zoom for exam invigilation 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 system requirements for Zoom. Information about the system requirements are available at the following link:

<https://support.zoom.us/hc/en-us>.

* Please note that Zoom servers are located outside Canada. If you would prefer to use only your first name or a nickname to login to Zoom, please discuss this with your instructor in advance of the test or examination.

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

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.

NOTICE:

Students are responsible for regularly checking their email, and the course OWL site for new notices related to the course.