Course Outline – Summer 2026

College of Engineering

Petroleum Engineering Department

CHEE482 / Environmental Impact Assessment

PETR 22

Bachelor of Engineering Technology - Petroleum

- Prerequisites:
- Co-Requisites: NA
- Credit Hours: 3
- Course Coordinator:
- Instructors' Names:
  Instructors' Office Hours:
- Instructors' Office Location:
- Instructors' telephone extension:
- Instructors' email addresses:
- Classroom Location and timings[1]: As per EduGate (On-Campus)

This course is part of the mentioned above program which is accredited by Engineers Australia.

Catalog Description

This course presents the environmental issues in oil and gas, ethical principles, and sustainability. Students will understand the importance and need for Environmental Impact Assessment while exploring and gaining insight into various aspects of such assessment. It will also provide the methodologies, tools, and processes for conducting EIA. Workshops and case studies will illustrate aspects of EIA in practice. The mathematical model on Atmospheric Air Dispersion will also be covered at the end of the course.

[1] Classroom timings and location are tentative, please refer to EduGate for the up to date information.

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Course Objectives and Student Learning Outcomes

Upon completion of this course, students should be able to:

LO1	*Explore the environmental issues in oil and gas and acquire full understanding of commitment towards environmental sustainability.*
LO2	*Explore the Kuwait regulations requirements related to Environmental Impact Assessment (EIA) under Kuwait Environmental Public Authority (KEPA)*
LO3	*Recognize the different stages of the Environmental Impact Assessment (EIA)*
LO4	*Develop the mitigation process for social and environmental impacts after identification and prediction of the adverse impacts*
LO5	*Execute EIA process on actual case studies including cases from Oil & Gas industries*
LO6	*Demonstrate the ability to design mathematical model on Atmospheric Air Dispersion*

Engineers Australia Stage 1 Competencies

Achieving the student learning outcomes of this course partially fulfills the following EA Stage 1 Competencies for Engineering Technologist.

Knowledge and Skills	1.1 Systematic, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the technology domain.
	1.2 Conceptual understanding of the, mathematics, numerical analysis, statistics, and computer and information sciences which underpin the technology domain.
	1.3 In-depth understanding of specialist bodies of knowledge within the technology domain.
	1.4 Discernment of knowledge development within the technology domain.
	1.5 Knowledge of engineering design practice and contextual factors impacting the technology domain.
	1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the technology domain.

Engineering Application Ability	2.1 Application of established engineering methods to broadly-defined problem solving within the technology domain.
	2.2 Application of engineering techniques, tools and resources within the technology domain.
	2.3 Application of systematic synthesis and design processes within the technology domain.
	2.4 Application of systematic approaches to the conduct and management of projects within the technology domain.
Professional and Personal Attributes	3.1 Ethical conduct and professional accountability.
	3.2 Effective oral and written communication in professional and lay domains.
	3.3 Creative, innovative and pro-active demeanor.
	3.4 Professional use and management of information.
	3.5 Orderly management of self, and professional conduct.
	3.6 Effective team membership and team leadership.

Course Content

Below are the topics that will be covered during this course[2]. Please note that topics are tentative to change.

Week	Topic	Resources required	Learning Outcome
1, 2	Introduction to Global Environmental Issues	**PPT 1**	**LO 1**
3	Ecological Ethics	**PPT 2**	**LO 1**
4	Introduction to EIA	**PPT 3**	**LO 3**
5	Overview to EIA	**PPT 4**	**LO 3**
6	Introduction to KEPA	**PPT 5**	**LO 2**
7, 8	Screening Stage of EIA	**PPT 6**	**LO 3**
9	Scoping Stage of EIA	**PPT 7**	**LO 3**
10	Impacts, its mitigation and reporting EIS	**PPT 8, 9**	**LO 4**
11	Practicing EIA through actual case studies	**PPT 3 - 9**	**LO 5**
12, 13	Air Dispersion Modeling	**PPT 10**	**LO 6**

[2] For the Summer Sessions, number of lectures per week is doubled and number of weeks is halved.

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Methods of Delivery

Classroom-Based delivery. Lecture notes will be uploaded on EduLearn. Ungraded Homework will be uploaded for students on EduLearn.

Any updates about the method of delivery will be communicated with the students via the official communication platforms.

Extent and Nature of Use of Technology

All the lectures' slides, lab manual and other learning material for this course are available online on the PETR482 webpage on EduLearn. Students are required to visit this page regularly to check for any update.
Course related announcements are sent by email. Students are required to check their email daily.

Textbook/s

For this course, the following textbook will be used:

1. Introduction to Environmental Impact Assessment, Third Edition.
   John Glasson, Riki Therivel and Andrew Chadwick
2. Environmental Impact Assessment, Second Edition, Larry W.Canter **Attendance**

Attendance

The student is required to attend designated live session on campus. A student who fails to do so will be marked as absent from that class.

Please refer to the AU Student Attendance Policy and Procedure on the AU portal.

Submission of Work

Please refer to the AU Code of Academic Integrity on the AU Portal.

Assessment Plan

The assessments dates are subjected to change according to the material coverage pace.

#	Assessment Title	Method of Assessment	Learning Outcomes Covered	Week	Weight
1	Midterm	Written Exam	2-3	Midterm Exams Period	25%
2	Continuous Assessment*	Quizzes & Assignment	1-5	TBA	25%
3	Attendance/Participation	In Class Participation/Attendance	N/A	1-14	10%
4	Final Exam	Written Exam	1-6	Final Exam Period	40%

* A student who misses an in-class assessment (quiz, in-class group work, in-class assignment, etc.) of a weight of 10% or less will not be eligible for makeup and will be automatically awarded a zero mark**.**

Students must refer to the AU Student Assessment Policy on the AU Portal with regards to assessments and re-assessment.

Grading Scale

Please refer to the AU Grading Policy on the AU Portal.