

Annexe A: New/Revised Course Content in OBTL+ Format

Course Overview

Expected Implementation in Academic Year (New format)	
Semester/Trimester/Others (specify approx. Start/End date)	
Course Author * Faculty proposing/revising the course	
Course Author Email	
Course Title	Petroleum Geology
Course Code	ES3101
Academic Units	0
Contact Hours	120
Research Experience Components	

Course Requisites (if applicable)

Pre-requisites	ES1003, ES2004, ES3002
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

Course Aims

This course aims at introducing the petroleum system. You will discover how hydrocarbons are formed, how they migrate to accumulate into reservoirs, and how petroleum scientists pinpoint, recover, and process petroleum products. By bridging the tools of structural geology, sedimentology, field geology, stratigraphy, and basin analysis to the study of petroleum systems, you will learn how to apply geological principles to the study, exploration, and exploitation (drilling process) of petroleum resources, and become acquainted with the main geological methods used for oil and gas exploration. In addition, you will be offered the opportunity to become Student Members of the South East Asia Petroleum Exploration Society and attend the bimonthly meetings in Singapore, where you are encouraged to network with petroleum professionals and discuss internships and career prospects. As a result, you will not only gain knowledge in the field of petroleum, but also have increased career opportunities as a petroleum professional.

Course's Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, you (student) would be able to:

Course Content

How petroleum is formed, recovered, and processed and what they are used for. How rock and reservoir properties (porosity, permeability) are affected by internal and external factors through time and space. How to reconstruct the burial history of a sedimentary basin using back-stripping and petrographic techniques. What is the current status of the oil and gas industry and what are its future challenges.

Reading and References (if applicable)

1- Hyne, N.J. (2012) Nontechnical guide to petroleum geology, exploration, drilling and production. Penn Well Corporation. 3rd edition, 698pp. ISBN-13: 978-0878148233 2- Bjorlykke, K. (2015) Petroleum Geoscience: from sedimentary environments to rock physics. ISBN 978-3-642-34132-8. Springer-Verlag Berlin Heidelberg, 662pp.

Planned Schedule

Week or Session	Topics or Themes	ILO	Delivery Mode	Activities	Readings
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Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
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Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Description of Assessment Component	Team/Individual	Rubrics	Level of Understanding
1	Continuous Assessment (CA): Others([assignments (e.g. term paper, essay)] Field Trip - Assignment)	1,2	1. a 2. a, b 3. a, b, c 4. a, b 5. b, c 6. a, b 7. a 8. b 10. a, b	20				
2	Continuous Assessment (CA): Others([quiz/test] Laboratories - Practical Quiz)	1,2,3	1. a 2. a, b 3. a, c 5. c 6. a, b 7. a 8. b	20				
3	Continuous Assessment (CA): Others([assignments (e.g. term paper, essay)] Laboratories - Exercises 1)	1,2,3	1. a 2. a, b 3. a, b, c 4. a, b 5. c 6. a, b 7. a 8. a, b 10. a, b	20				
4	Continuous Assessment (CA): Others([presentations] Laboratories - Presentation)	1,2	1. a 2. a, b 3. b, c 4. a, b 5. a, b 6. a, b 7. b 8. a, b 9. a	20				
5	Continuous Assessment (CA): Others([quiz/test] Lectures - Final Quiz)	1,2,3	1. a 2. a, b 3. a, b, c 5. c 6. a, b 7. a, b 8. b 9. a	20				

Description of Assessment Components (if applicable)

Formative Feedback

Following lab sessions and field work, you will receive direct written feedback up to two weeks after you present your assignments and reports. In this way the lecturer and you can monitor progress. You will also be given oral feedback on your group projects and final tests.

NTU Graduate Attributes/Competency Mapping

This course intends to develop the following graduate attributes and competencies (maximum 5 most relevant)

Attributes/Competency	Level
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Course Policy

Policy (Academic Integrity)

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Policy (General)

(1) General

You are expected to complete all assigned readings and activities, attend all classes punctually and take all scheduled assignments, reports and tests by due dates. You are expected to take responsibility to follow up with course notes, assignments and course related announcements. You are expected to participate in all seminar discussions and activities.

Policy (Absenteeism)

(2) Absenteeism

In-class activities make up a significant portion of your course grade. Absence from class without a valid reason will affect your overall course grade. Valid reasons include falling sick supported by a medical certificate and participation in NTU's approved activities supported by an excuse letter from the relevant bodies.

Policy (Others, if applicable)

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Last Updated Date: 26-11-2023 08:00:00

Last Updated By: