



Faculty of Engineering


School of Minerals and Energy Resources Engineering

Postgraduate Course Outline

PTRL5019

Reservoir Engineering A

Dr Peyman Mostaghimi



1. INFORMATION ABOUT THE COURSE.....	3
2. AIMS, LEARNING OUTCOMES AND GRADUATE ATTRIBUTES	4
3. REFERENCE RESOURCES	4
4. COURSE CONTENT AND LEARNING ACTIVITIES.....	6
5. COURSE ASSESSMENT	8
6. ASSESSMENT CRITERIA.....	9
7. STUDYING A UG COURSE IN UNSW MINERALS AND ENERGY RESOURCES ENGINEERING.....	9

Course Code:	PTRL5019	Term:	T1, 2020	Level:	PG	Units/Credits	6 UOC
--------------	----------	-------	----------	--------	----	---------------	-------

The aim of this course is to give you an insight in to petroleum reservoirs; to introduce you to important rock and fluid characteristics; and to assist you to answer key questions to reservoir engineers.

At the conclusion of this course, students should be able to:

1. Understand and apply fundamental theories and concepts to solve many reservoir engineering problems, e.g. initial hydrocarbon in place, basic rock and fluid properties, hydrostatic pressure distribution, water influx and single phase fluid flow.
2. Critically analyse the underlying theories, concepts, assumptions and arguments concerning fluid flow under different reservoir conditions.

Support material for this course including, whenever available, copies of lecture notes, recommended readings, etc. can be found on Moodle.

The lecture note may be viewed and downloaded from the UNSW-Moodle <http://moodle.telt.unsw.edu.au/>.



Followings are the recommended books for this course.

- *Fundamentals of Reservoir Engineering*, Dake (1978).
- *The Practice of Reservoir Engineering*, Dake (1994).
- *Applied Petroleum Reservoir Engineering*, Craft and Hawkins (rev. Terry) (1991).

Links to websites etc.

The University and the Faculty provide a wide range of support services for students, including:

- UNSW Learning Centre (<http://www.lc.unsw.edu.au>)
- Counselling support - <http://www.counselling.unsw.edu.au>
- Library training and support services - <http://www.library.unsw.edu.au/>
- OnePetro – (<http://www.onepetro.org>)

- 
- 
1. Introduction to Reservoir Engineering
 2. Reservoir Description (reservoir characterisation)
 3. Rock Properties (rock micro structure)
 4. Volumetric methods
 - 5.

		<ul style="list-style-type: none"> • Chapters 1, 2 and 3 	
		<ul style="list-style-type: none"> • Chapters 3, 4, 5 	
		<ul style="list-style-type: none"> • Chapters 5, 6 	
		<ul style="list-style-type: none"> • Chapters 6, 7 	
		<ul style="list-style-type: none"> • Chapter 7 	
		<ul style="list-style-type: none"> • N/A 	
		<ul style="list-style-type: none"> • Chapter 8 	
		<ul style="list-style-type: none"> • Chapter 8 	
		<ul style="list-style-type: none"> • Presentations 	

Study Period 29 Apr – 1 May 2020
Exam Period 2 May – 16 May 2020

Other UNSW Key dates: <https://student.unsw.edu.au/new-calendar-dates>

1	TBA during the course	5%		1,2
2	TBA	6%		1,2
3	TBA	12%		1,2
4	TBA	12%		1,2
5	TBA	15%		1,2
6	TBA	50%		1,2

Assignments related details/submission-box will be available online through Moodle. Access to the Moodle site is via the Moodle icon on the MyUNSW homepage.

The assessment criteria provides a framework for you to assess your own work before formally submitting major assignments to your course convenor. Your course convenor will be using this framework to assess your work and as a way to assess whether you have met the listed learning outcomes and the graduate attributes for your program. We ask that you don't use the assessment criteria guidelines as a checklist, but as a tool to assess the quality of your work. Your course convenor will also be looking at the quality, creativity and the presentation of your written assignment as they review the framework. Rubrics, wherever applicable, will be provided at the time of the assignment release.

At times, the School or your course convenors may need to contact you about your course or your enrolment. Your course convenors will use the email function within Moodle or we will contact you on your @student.unsw.edu.au email address.

We understand that you may have an existing email account and would prefer for your UNSW emails to be redirected to your preferred account. Please see these instructions on how to redirect your UNSW emails: <https://www.it.unsw.edu.au/students/email/index.html>

We are always ready to assist you with your inquiries. To ensure your question is directed to the correct person, please use the email address below for:

Enrolment or other admin questions regarding your program:
<https://unswinsight.microsoftcrmpartals.com/web-forms/>

Course inquiries: these should be directed to the Course Convenor.

UNSW Minerals and Energy Resources Engineering provides blended learning using the on-line Moodle LMS (Learning Management System).

It is essential that you have access to a PC or notebook computer. Mobile devices such as smart phones and tablets may compliment learning, but access to a PC or notebook computer is also required. Note that some specialist engineering software is not available for Mac computers.

Mining Engineering Students: OMB G48/49
Petroleum Engineering Students: TETB

It is recommended that you have regular internet access to participate in forum discussion and group work. To run Moodle most effectively, you should have:

- broadband connection (256 kbit/sec or faster)
- ability to view streaming video (high or low definition UNSW TV options)

More information about system requirements is available at www.student.unsw.edu.au/moodle-system-requirements

Course outlines, support materials are uploaded to Moodle, the university standard Learning Management System (). In addition, on-line assignment submissions are made using the assignment dropbox facility provided in Moodle. All enrolled students are automatically included in Moodle for each course. To access these documents and other course resources, please visit: www.moodle.telt.unsw.edu.au

The School has developed a guideline to help you when submitting a course assignment.

We encourage you to retain a copy of every assignment submitted for assessment for your own record either in hardcopy or electronic form.

All assessments must have a assessment cover sheet attached.

Full marks for an assignment are only possible when an assignment is received by the due date.

We understand that at times you may not be able to submit an assignment on time, and the School will accommodate any fair and reasonable extension. We would recommend you review the UNSW Special Consideration guidelines – see following section.

Late submission will not be accepted and will be considered as no submission.

You can apply for special consideration through [UNSW Student Central](#) when illness or other circumstances interfere with your assessment performance. Sickness, misadventure or other circumstances beyond your control may:

- Prevent you from completing a course requirement,
- Keep you from attending an assessable activity,
-

In some instances your final course result may be withheld and not released on the UNSW planned date. This is indicated by a course grade result of either:

- WD – which usually indicates you have not completed one or more items of assessment or there is an issue with one or more assignment; or
- WC – which indicates you have applied for Special Consideration due to illness or misadventure and the course results have not been finalised.

In either event it would be your responsibility to contact the Course Convener as soon as practicable but no later than five (5) days after release of the course result. If you don't contact the convener on time, you may be required to re-submit an assignment or re-sit the final exam and may result in you failing the course. You would also have a NC (course not completed) mark on your transcript and would need to re-enroll in the course.

The Student Equity and Disabilities Unit (SEADU) aims to provide all students with support and professional advice when circumstances may prevent students from achieving a successful university education. Take a look at their website: www.studentequity.unsw.edu.au/

Course Convenor: _____
Course Code: _____ Course Title: _____
Assignment: _____
Due Date: _____
Student Name: _____ Student ID: _____

Before submitting this assignment, the student is advised to review:

- the assessment requirements contained in the briefing document for the assignment;
- the various matters related to assessment in the relevant Course Outline; and
- the *Plagiarism and Academic Integrity* website at < <http://www.lc.unsw.edu.au/plagiarism/pintro.html> > to ensure they are familiar with the requirements to provide appropriate acknowledgement of source materials.

If after reviewing this material there is any doubt about assessment requirements, then in the first instance the student should consult with the Course Convenor and then if necessary with the Director – Undergraduate Studies.

While students are generally encouraged to work with other students to enhance learning, all assignments submitted for assessment must be their entire own work and duly acknowledge the use of other person's work or material. The student may be required to explain any or all parts of the assignment to the Course Convenor or other authorised persons. *Plagiarism* is using the work of others in whole or part without appropriate acknowledgement within the assignment in the required form. *Collusion* is where another person(s) assists in the preparation of a student's assignment without the consent or knowledge of the Course Convenor.

Plagiarism and *Collusion* are considered as Academic Misconduct and will be dealt with according to University Policy.

I declare that:

- This assessment item is entirely my own original work, except where I have acknowledged use of source material [such as books, journal articles, other published material, the Internet, and the work of other