



مواصفات مقرر: مشروع تخرج 1

Course Specification of: Graduation Project (1)

المعلومات العامة عن المقرر						
1.	اسم المقرر Course Title	Graduation Project (1) مشروع تخرج 1				
2.	رمز المقرر ورقمه Course Code and Number	PNGE 466				
3.	الساعات المعتمدة للمقرر Credit Hours	الساعات المعتمدة			الإجمالي Total	
		محاضرات Lecture	عملي Practical	سمنار/تمارين Seminar/Tutorial		تدريب Training
		2	0			
4.	المستوى والفصل الدراسي Study Level and Semester	4 th level / 1st semesters				
5.	المتطلبات السابقة للمقرر (إن وجدت) Pre-requisites (if any)	-				
6.	المتطلبات المصاحبة (إن وجدت) Co-requisites (if any)	-				
7.	البرنامج الذي يدرس له المقرر Program (s) in which the course is offered	Bachelor of Petroleum and Natural Gas Engineering				
8.	لغة تدريس المقرر Language of teaching the course	English				
9.	نظام الدراسة Study System	Semesters				
10.	مكان تدريس المقرر Location of teaching the course	Class				
11.	اسم معد (و) مواصفات المقرر Prepared by	Assoc.Prof. Adel Al-Matary				
12.	تاريخ اعتماد مجلس الجامعة Date of Approval	2020				

وصف المقرر Course Description

وصف المقرر بالإنجليزية

The main aim of the course is to familiarize the students with the industrial field data and how to use it in the Oil and gas field development. An engineering assignment requiring the student to demonstrate initiative and assume responsibility, Students can propose their own project. A project report is required at the end of the eight semesters. The graduates are supervised and trained in one or multiple fields of real Petroleum engineering projects. Upon completion of this course, the students must achieve the Petroleum engineer professional skills appropriately and sufficiently to begin his/her career after graduation.

Prepared by
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Assoc.Prof. Huda Al-Emad

Rector of Sana'a University
Prof. Dr. Al Qaseem Mohammed Abas



Course Intended Learning Outcomes (CILOs) مخرجات تعلم المقرر

After completing the course, the student will be able to:		بعد الانتهاء من دراسة المقرر سوف يكون الطالب قادرا على أن:	
a1.	Describe the use of petroleum engineering science to develop Oil or Gas field.		a1.
a2.	Describe the role of different petroleum engineering disciplines in evaluation of Oil or Gas field.		a2.
a3.	Differentiate between types and uses of different geological maps		a3.
b1.	Select appropriate solutions for engineering problems based on analytical thinking and data collection.		b1.
b2.	Analyze the Petrophysical Logs and Calculate the Oil in place using Different methods		b2.
b3.	Propose an appropriate development plan and estimating its feasibility and economics		b3.
c1.	Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally		c1.
c2.	Professionally merge the engineering knowledge, understanding, collected data and feedback to make the integration of project design.		c2.
c3.	Apply Practical Knowledge in final presentations.		c3.
d1.	Work in a team.		d1.
d2.	Share ideas and communicate with others		d2.
d3.	Prepare feasibility studies, budgets and manage petroleum projects.		d3.

مواءمة مخرجات تعلم المقرر مع مخرجات التعلم للبرنامج:

Alignment of CILOs (Course Intended Learning Outcomes) to PILOs (Program Intended Learning Outcomes)

مخرجات التعلم المقصودة من المقرر (Course Intended Learning Outcomes)		مخرجات التعلم المقصودة من البرنامج (Program Intended Learning Outcomes) (تكتب جميع مخرجات البرنامج كما هي رمزا ونصا)	
a1.	Describe the use of petroleum engineering science to develop Oil or Gas field.	A1	
a2.	Describe the role of different petroleum engineering disciplines in evaluation of Oil or Gas field.	A2	
a3.	Differentiate between types and uses of different geological maps	A3	
b1.	Select appropriate solutions for engineering problems based on analytical thinking and data collection.	B1	
b2.	Analyze the Petrophysical Logs and Calculate the Oil in place using Different methods	B2	



b3.	Propose an appropriate development plan and estimating its feasibility and economics	B3	
c1.	Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally	C1	
c2.	Professionally merge the engineering knowledge, understanding, collected data and feedback to make the integration of project design.	C2	
c3.	Apply Practical Knowledge in final presentations.	C3	
d1.	Work in a team.	D1	
d2.	Share ideas and communicate with others	D2	
d3.	Prepare feasibility studies, budgets and manage petroleum projects.	D3	

مواصلة مخرجات التعلم باستراتيجيات التعليم والتعلم والتقييم Alignment of CILOs to Teaching and Assessment Strategies		
أولاً: مواصلة مخرجات تعلم المقرر (المعارف والفهم) باستراتيجية التعليم والتعلم والتقييم: First: Alignment of Knowledge and Understanding CILOs		
مخرجات المقرر / المعرفة والفهم Knowledge and Understanding CILOs	استراتيجية التعليم والتعلم Teaching Strategies	استراتيجية التقييم Assessment Strategies
a1 - Describe the use of petroleum engineering science to develop Oil or Gas field.	Discussion Research Problem solving	-Project preparation and weekly discussion with the project supervisor - Final Presentation and report
a2 - Describe the role of different petroleum engineering disciplines in evaluation of Oil or Gas field.		
a3 - Differentiate between types and uses of different geological maps		
ثانياً: مواصلة مخرجات تعلم المقرر (المهارات الذهنية) باستراتيجية التدريس والتقييم: Second: Alignment of Intellectual Skills CILOs		
مخرجات المقرر / المهارات الذهنية Intellectual Skills CILOs	استراتيجية التعليم والتعلم Teaching Strategies	استراتيجية التقييم Assessment Strategies
b1 - Select appropriate solutions for engineering problems based on analytical thinking and data collection.	Discussion Research Problem solving	-Project preparation and weekly discussion with the project supervisor - Final Presentation and report
b2 - Analyze the Petrophysical Logs and Calculate the Oil in place using Different methods		
b3 - Propose an appropriate development plan and estimating its feasibility and economics		

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Assoc.Prof. Huda Al-Emad



ثالثاً: مواءمة مخرجات تعلم المقرر (المهارات المهنية والعملية) باستراتيجية التدريس والتقييم:

Third: Alignment of Professional and Practical Skills CILOs

مخرجات المقرر / المهارات المهنية والعملية Professional and Practical Skills CILOs	استراتيجية التعليم والتعلم Teaching Strategies	استراتيجية التقييم Assessment Strategies
c1- Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally	Discussion Research Problem solving	-Project preparation and weekly discussion with the project supervisor - Final Presentation and report
c2- Professionally merge the engineering knowledge, understanding, collected data and feedback to make the integration of project design.		
c3- Apply Practical Knowledge in final presentations.		

رابعاً: مواءمة مخرجات تعلم المقرر (المهارات العامة) باستراتيجية التدريس والتقييم:

Fourth: Alignment of Transferable (General) Skills CILOs

مخرجات المقرر Transferable (General) Skills CILOs	استراتيجية التعليم والتعلم Teaching Strategies	استراتيجية التقييم Assessment Strategies
d1- Work in a team.	Discussion Research Problem solving	-Project preparation and weekly discussion with the project supervisor - Final Presentation and report
d2- Share ideas and communicate with others		
d3- Prepare feasibility studies, budgets and manage petroleum projects.		

محتوى المقرر Course Content

Theoretical Aspect موضوعات الجانب النظري

الرقم Order	الموضوعات الرئيسية/الوحدات Topic List / Units	الموضوعات الفرعية Sub Topics List	عدد الأسابيع Number of Weeks	الساعات الفعلية Contact Hours	رموز مخرجات التعلم للمقرر (CILOs)
1	Data Introduction and Familiarization		1	2	a1
2	Geological Mapping requirements		1	2	a2 b1 b2 c1 d1
3	Petrophysical Logging Analysis		1	2	b2 c1 d1
4	Drilling Engineering Requirements		1	2	b1 b2 b3 c1 d1

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5	Reservoir Engineering Requirements		1	2	a1 a2 b3 d1
6	Production Engineering Requirements		1	2	a1 b3 d1
7	Report Writing		1	2	c2 d2
8	Presentation Skills		1	2	c3 d2
عدد الأسابيع والساعات الفعلية Number of Weeks /and Contact Hours Per Semester			8	16	

B - Graduation Project Content					
Order	Tasks/ Experiments		Number of Weeks	contact hours	Learning Outcomes
1	Project objectives and methodology	Review previous projects, studies, researches, and references	1	2	a1, a2, a3
		Search and collecting graduation project data from different resources	1	2	
		Find study objectives and methodology.	1	2	
		Preparation of full plan and time schedule for the graduation project.	1	2	
2	Project parameters and alternatives	Identifying the parameters of filed survey, experimental works, numerical investigations, and design codes and standards	1	2	a1, a2, a3
		Compare and select appropriate methods, systems, and alternatives	1	2	
		Revise the study plane and time schedule	1	2	
3	Field survey, experimental testing, and numerical analysis	Conduct field survey, experimental testing, numerical analysis	4	8	a1, a2, a3 ,b1, b2, b3, c1, c2, c3, d1, d2, d3
		Confirm the results output through comparing with the initial assumptions	1	2	
4	Results and discussion	Conduct results verifications and comparisons	1	2	a1, a2, a3 ,b1, b2, b3, c1, c2, c3, d1, d2, d3
		Determination the impact of different factors and variables	1	2	
5	Progress evaluation		1	2	
6	Project documentations	Prepare first draft of the project report presenting the carried out stages, calculations, results,	3	6	a1, a2, a3 ,b1, b2, b3, c1, c2, c3, d1, d2, d3

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		conclusions, and conclusion			
		Prepare first draft of the project construction documents including, detailed drawings, specifications, tables, notes, and cost estimation	3	6	
7	First draft submission and revision		1	2	
8	Project examination and discussion		1	2	
Number of Weeks /and Units Per Semester			23	46	

Teaching Strategies استراتيجيات التعليم والتعلم

- Discussion
- Research
- Problem solving

Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Project preparation and weekly discussion with the project supervisor	weekly	100	50%	a1, a2, a3 ,b1, b2, b3, c1, c2, c3, d1, d2, d3
2	Final Presentation and report	Week 31	100	50%	a1, a2, a3 ,b1, b2, b3, c1, c2, c3, d1, d2, d3
3	Total		200	100%	

Learning Resources مصادر التعلم

توثق المراجع حسب نظام APA (اسم المؤلف، سنة النشر، اسم الكتاب، دار النشر، بلد النشر).

Required Textbook(s) المراجع الرئيسية (لا تزيد عن مرجعين)

All Petroleum Engineering References related to project title

Essential References المراجع المساندة

All Petroleum Engineering References related to project title

Electronic Materials and Web Sites etc. المصادر الإلكترونية ومواقع الإنترنت

1. www.sciencedirect.com
2. www.springer.com
3. www.aapg.com
4. www.spe.com
5. www.pepa.com

V. Course Policies:

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1	<p>Class Attendance:</p> <ul style="list-style-type: none"> - Students are expected to attend classes regularly and promptly. - The attendance should not be less than 80%. - If the student has been absent, he is responsible for finding out any missed material by consulting other students or going to the professor's office hours.
2	<p>Tardy:</p> <ul style="list-style-type: none"> - Attendance and arriving on time for the class are necessary. If the student is late, he will be prevented from class.
3	<p>Exam Attendance/Punctuality:</p> <ul style="list-style-type: none"> - According to the rules the student gets absent in the exam of the course.
4	<p>Assignments & Projects:</p> <ul style="list-style-type: none"> - Papers survey or projects should be submitted by the time detriment by the professor.
5	<p>Cheating:</p> <ul style="list-style-type: none"> - According to the rules, cheating is a serious offense and will always result in an imposition of a penalty. The penalties that can be started from the range of canceling the result of the course to canceling the student's admission.
6	<p>Plagiarism:</p> <ul style="list-style-type: none"> - Plagiarism is a serious offense and will always result in an imposition of a penalty. The penalties that can be started by making a zero mark for the work.
7	<p>Other policies:</p> <ul style="list-style-type: none"> - The student should by a commitment by the rules inside class and university. Therefore, he is expected to show respect for his classmate, instructors & others.



كلية: البترول والموارد الطبيعية
قسم/ برنامج: هندسة النفط والغاز الطبيعي
العام الجامعي: 2019-2020م

خطة مقرر: مشروع تخرج 1 Course Plan (Syllabus): Graduation Project (1)

معلومات عن أستاذ المقرر Information about Faculty Member Responsible for the Course						
الاسم Name	الساعات المكتبية (أسبوعياً) Office Hours					
المكان ورقم الهاتف Location & Telephone No.	السبت SAT	الأحد SUN	الاثنين MON	الثلاثاء TUE	الأربعاء WED	الخميس THU
البريد الإلكتروني E-mail						

معلومات عامة عن المقرر General information about the course						
1.	اسم المقرر Course Title	Graduation Project (1) مشروع تخرج 1				
2.	رمز المقرر ورقمه Course Code and Number	PNGE 466				
3.	الساعات المعتمدة للمقرر Credit Hours	الساعات المعتمدة Credit Hours				الإجمالي Total
		محاضرات Lecture	عملي Practical	سمنار/تمارين Seminar/Tutorial	تدريب Training	
		2	0		2	
4.	المستوى والفصل الدراسي Study Level and Semester	4 th level / 1st semesters				
5.	المتطلبات السابقة للمقرر Pre-requisites	-				
6.	المتطلبات المصاحبة (إن وجدت) Co-requisite	-				
7.	البرنامج الذي يدرس له المقرر Program (s) in which the course is offered	Bachelor of Petroleum and Natural Gas Engineering				
8.	لغة تدريس المقرر Language of teaching the course	English				
9.	مكان تدريس المقرر Location of teaching the course	Faculty buildings				

ملاحظة: الساعة المعتمدة للتمارين تساوي ساعتين فعليتين خلال التدريس.

وصف المقرر Course Description

The main aim of the course is to familiarize the students with the industrial field data and how to use it in the Oil and gas field development. An engineering assignment requiring the student to demonstrate initiative and assume responsibility, Students can propose their own project. A project report is required at the end of the eight semesters. The graduates are supervised and trained in one or multiple fields of real Petroleum engineering projects. Upon completion of this course, the students must achieve

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the Petroleum engineer professional skills appropriately and sufficiently to begin his/her career after graduation.

Course Intended Learning Outcomes (CILOs) مخرجات تعلم المقرر

After completing the course, the student will be able to:	
a1.	Describe the use of petroleum engineering science to develop Oil or Gas field.
a2.	Describe the role of different petroleum engineering disciplines in evaluation of Oil or Gas field.
a3.	Differentiate between types and uses of different geological maps
b1.	Select appropriate solutions for engineering problems based on analytical thinking and data collection.
b2.	Analyze the Petrophysical Logs and Calculate the Oil in place using Different methods
b3.	Propose an appropriate development plan and estimating its feasibility and economics
c1.	Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally
c2.	Professionally merge the engineering knowledge, understanding, collected data and feedback to make the integration of project design.
c3.	Apply Practical Knowledge in final presentations.
d1.	Work in a team.
d2.	Share ideas and communicate with others
d3.	Prepare feasibility studies, budgets and manage petroleum projects.

Course Content محتوى المقرر

Theoretical Aspect الموضوعات الجانب النظري

الرقم Order	الموضوعات الرئيسية/ الوحدات Topic List / Units	الموضوعات الفرعية Sub Topics List	عدد الأسابيع Number of Weeks	الساعات الفعلية Contact Hours
1	Data Introduction and Familiarization		1	2
2	Geological Mapping requirements		1	2
3	Petrophysical Logging Analysis		1	2
4	Drilling Engineering Requirements		1	2
5	Reservoir Engineering Requirements		1	2
6	Production Engineering Requirements		1	2
7	Report Writing		1	2
8	Presentation Skills		1	2
عدد الأسابيع والساعات الفعلية Number of Weeks /and Contact Hours Per Semester			8	16

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B - Graduation Project Content				
Order	Tasks/ Experiments		Number of Weeks	contact hours
1	Project objectives and methodology	Review previous projects, studies, researches, and references	1	2
		Search and collecting graduation project data from different resources	1	2
		Find study objectives and methodology.	1	2
		Preparation of full plan and time schedule for the graduation project.	1	2
2	Project parameters and alternatives	Identifying the parameters of filed survey, experimental works, numerical investigations, and design codes and standards	1	2
		Compare and select appropriate methods, systems, and alternatives	1	2
		Revise the study plane and time schedule	1	2
3	Field survey, experimental testing, and numerical analysis	Conduct field survey, experimental testing, numerical analysis	4	8
		Confirm the results output through comparing with the initial assumptions	1	2
4	Results and discussion	Conduct results verifications and comparisons	1	2
		Determination the impact of different factors and variables	1	2
5	Progress evaluation		1	2
6	Project documentations	Prepare first draft of the project report presenting the carried out stages, calculations, results, conclusions, and conclusion	3	6

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		Prepare first draft of the project construction documents including, detailed drawings, specifications, tables, notes, and cost estimation	3	6
7	First draft submission and revision		1	2
8	Project examination and discussion		1	2
Number of Weeks /and Units Per Semester			23	46

استراتيجيات التعليم والتعلم Teaching Strategies

- Discussion
- Research
- Problem solving
-

Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment
1	Project preparation and weekly discussion with the project supervisor	weekly	100	50%
2	Final Presentation and report	Week 31	100	50%
3	Total		200	100%

مصادر التعلم Learning Resources

توثق المراجع حسب نظام APA (اسم المؤلف، سنة النشر، اسم الكتاب، دار النشر، بلد النشر).

المراجع الرئيسية (لا تزيد عن مرجعين) Required Textbook(s)

All Petroleum Engineering References related to project title

المراجع المساندة Essential References

All Petroleum Engineering References related to project title

المصادر الإلكترونية ومواقع الإنترنت Electronic Materials and Web Sites etc.

6. www.sciencedirect.com
7. www.springer.com
8. www.aapg.com
9. www.spe.com
10. www.pepa.com

VI. Course Policies:

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