



مواصفات المقرر: اختبار الإبار

Course Specification of: Well Testing

المعلومات العامة عن المقرر						
1.	اسم المقرر Course Title	Well Testing				
2.	رمز المقرر ورقمه Course Code and Number	PNGE 434				
3.	الساعات المعتمدة للمقرر Credit Hours	الساعات المعتمدة Credit Hours			الإجمالي Total	
		محاضرات Lecture	عملي Practical	سمنار/تمارين Seminar/Tutorial		تدريب Training
		2	0	1	0	3
4.	المستوى والفصل الدراسي Study Level and Semester	Fourth Semester/second semester				
5.	المتطلبات السابقة المقرر (إن وجدت) Pre-requisites (if any)	PNGE 351				
6.	المتطلبات المصاحبة (إن وجدت) Co-requisites (if any)	NA				
7.	البرنامج الذي يدرس له المقرر Program (s) in which the course is offered	Petroleum and Natural Gas Engineering				
8.	لغة تدريس المقرر Language of teaching the course	English				
9.	نظام الدراسة Study System	Semester wise				
10.	مكان تدريس المقرر Location of teaching the course	Faculty of Petroleum and Natural Resources				
11.	اسم معد (و) مواصفات المقرر Prepared by	Prof. Abbas Mohamed Al-Khudafi				
12.	تاريخ اعتماد مجلس الجامعة Date of Approval					

وصف المقرر Course Description

وصف المقرر بالإنجليزية

وصف المقرر بالعربية

The course provides students with the theory and practice of deliverability and pressure transient testing of oil and gas wells. topics included in this course are: introduction to well testing, basic concepts of fluid flow in porous media, pressure drawdown testing techniques for oil wells, pressure buildup analysis techniques for oil wells, injection well transient testing and analysis, modern well testing, other type of oil well tests, gas well testing, well test planning and execution.

مخرجات تعلم المقرر (CILOs) Course Intended Learning Outcomes

After completing the course, the student will be able to:

بعد الانتهاء من دراسة المقرر سوف يكون الطالب قادرا على أن:

Prepared by
Assoc.Prof. Adel Al-Matary

Quality Assurance Unit
Assoc.Prof. Adel Al-Matary

Dean of the Faculty
Assoc.Prof. Bassim
AlKhibash

Dean of the Development
& Quality Assurance Center
Assoc.Prof. Huda Al-Emad

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



a1.	Describe the behavior of infinite – acting and bounded reservoirs, the various flow regimes and boundary effects.		- a1
a2.	Recognize the concept of superposition and its applications in space and time.		- a2
a3.	Identify different types of tests and reservoir type.		-a3
b1.	Compare between transient test and deliverability test.		-b1
b2.	Differentiate between reservoir and non-reservoir behaviors.		- b2
c1.	Conduct test design of oil and gas well.		- c1
c2.	Analyze pressure transient and deliverability test to determine the reservoir and well characteristics of oil and gas wells.		- c2
c3.	Use computer program package for pressure transient well test.		- c3
d1.	Write report in well test analysis and interpretation.		-d1

موازنة 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 behavior of infinite – acting and bounded reservoirs, the various flow regimes and boundary effects.	A1	Demonstrate the concepts of basic science and mathematics related to field of petroleum engineering.
a2	Recognize the concept of superposition and its applications in space and time.	A2	Define the basic concepts of petroleum exploration, drilling and production as well as demonstrate global and local safety and environment impact on oil and gas operations.
a3	Identify different types of tests and reservoir type.	A3	Utilize formation evaluations, well logging, well test analysis, modeling and simulation programs to define properties of reservoir rock and fluid in oil and gas bearing formation
b1	Compare between transient test and deliverability test.	B1	Use the principles of engineering in developing solutions to practical petroleum engineering and select appropriate computer software for modeling
b2	Differentiate between reservoir and non-reservoir behaviors	B2	Evaluate well logs and well test operations to identify maps of reservoir and select the best method of petroleum recovery.
c1	Conduct test design of oil and gas well.	C1	Carry out special engineering design in all petroleum engineering projects.
c2	Analyze pressure transient and	C2	Analysis of well logs and well testing and practice the

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	deliverability test to determine the reservoir and well characteristics of oil and gas wells.		techniques for constructing engineering graphics.
c3	Use computer program package for pressure transient well test.	C3	Deal with the high level of uncertainty in definition and solution of petroleum reservoir problems.
d1	Write report in well test analysis and interpretation.	D2	Communicate effectively using modern technology methods.

مواءمة مخرجات التعلم باستراتيجيات التعليم والتعلم والتقييم Alignment of CILOs to Teaching and Assessment Strategies			
أولاً: مواءمة 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 behavior of infinite – acting and bounded reservoirs, the various flow regimes and boundary effects.	<ul style="list-style-type: none"> - Lecture - Discussions - Self-learning - Video 	<ul style="list-style-type: none"> - Quiz - Oral questions - Exam 	
a2 - Recognize the concept of superposition and its applications in space and time.			
a3- Identify different types of tests and reservoir type.			
ثانياً: مواءمة 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 - Compare between transient test and deliverability test.	<ul style="list-style-type: none"> - Group working - Lecture - Problem solving - Project ▪ Tutorial 	<ul style="list-style-type: none"> ▪ Oral evaluation ▪ Project evaluation ▪ Exam ▪ Homework 	
b2 - Differentiate between reservoir and non-reservoir behaviors			
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- Conduct test design of oil and gas well.	<ul style="list-style-type: none"> - Group working - Project 	<ul style="list-style-type: none"> - Oral evaluation - Project 	



c2-	Analyze pressure transient and deliverability test to determine the reservoir and well characteristics of oil and gas wells.	- Lecture - Tutorial	evaluation - Exam - Homework
c3-	Use computer program package for pressure transient well test.		

رابعاً: مواعمة 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- Write report in well test analysis and interpretation.	- Project - Group discussions - Group learning	- Project Evaluation - Oral Presentation - Oral evaluation

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 الفعالية Contact Hours	رموز مخرجات التعلم للمقرر (CILOs)
1	Introduction to well testing	<ul style="list-style-type: none"> • Role of Oil Well Tests and Information in Petroleum Industry • Well test objectives • Well Test Data Acquisition 	1	2	a1,a2,a3
2	Basic concepts of fluid flow in porous media	<ul style="list-style-type: none"> • Superposition • Wellbore-storage • Radius of investigation • Skin effect • Flow regimes 	1	2	a1,a2,a3,b2
3	Pressure Drawdown Testing Techniques for Oil Wells	<ul style="list-style-type: none"> • Introduction • Single rate test 	1	2	a1,a2, a3,b1,b2,c2
		<ul style="list-style-type: none"> • Two rate tests • Multi-rate tests 	1	2	
4	Pressure Buildup Analysis Techniques for Oil	<ul style="list-style-type: none"> • Ideal buildup • Actual buildup • Analysis and interpretation 	1	2	a1,a2, a3,b1,b2,c2

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	Wells	methods			
		<ul style="list-style-type: none"> Estimation methods of original and Average Reservoir Pressure (MBH-method and Muskat method) 	1	2	
5	Injection Well Transient Testing and Analysis	<ul style="list-style-type: none"> Introduction Injectivity Test Analysis Methods Pressure Fall-off Test Analysis Methods Two-rate Injectivity Test Analysis Step-rate Injectivity Testing 	1	2	a1,a2, a3,b1,b2,c2
6	Mid-term exam		1	2	a1,a2, a3,b1,b2,c2
7	Modern well testing	<ul style="list-style-type: none"> Pressure Derivative Horizontal well test 	1	2	a1,a2, a3,b1,b2,c2
		<ul style="list-style-type: none"> Fundamentals of Type Curve Matching Methods for Oil Wells Ramey's type curve McKinley type curve Gringarten et all type curve 	1	2	
8	Other type of oil well tests	<ul style="list-style-type: none"> Drill-stem Testing Methods Wireline Formation Test Data Evaluation 	1	2	a1,a2, a3,b1,b2,c2
		<ul style="list-style-type: none"> Interfernece and pulse testing 	1	2	
9	Gas Well Testing	<ul style="list-style-type: none"> Pseudopressure (Real Gas Potential) Treatment Turbulent Flow Factor Conventional and Isochronal Gas Well Tests 	1	2	a1,a2, a3,b1,b2,c2
		<ul style="list-style-type: none"> Isochronal Test Modified Isochronal Test Drawdown or Falloff Test Buildup Test 	1	2	
10	Well Test Planning and Execution.	<ul style="list-style-type: none"> Measurement of Pressures Bottomhole Mechanical Downhole-Recording Gauges Bottomhole Electronic Surface-Recording Gauges Bottomhole Electronic 	1	2	a1,a2, a3,b1,b2,c1,c2,c3

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		Downhole-Recording Gauges • Planning a Well Test			
11	Final Exam		1	2	a1,a2, a3,b1,b2,c1,c2
عدد الأسابيع والساعات الفعلية Number of Weeks /and Contact Hours Per Semester			16	32	

الموضوعات العملية (إن وجدت) Practical Aspect (if any)				
الرقم Order	التجارب العملية/ التمارين / تدريبات Practical / Exercises/ Tutorials topics	عدد الأسابيع Number of Weeks	الساعات الفعلية Contact Hours	رموز مخرجات التعلم Course ILOs
1	Analysis of flow test of oil well	2	4	b1,b2,c2,c3,d1
2	Multi-rate tests analysis	2	4	b1,b2,c2,c3,d1
3	Pressure Buildup Analysis Techniques for Oil Wells	2	4	b1,b2,c2,c3,d1
4	Analysis Using Type Curves matching	1	2	b1,b2,c2,c3,d1
5	Analysis and Interpretation of gas well testing	2	4	b1,b2,c2,c3,d1
6	Analysis and interpretation of interference test and Pulse test	1	2	b1,b2,c2,c3,d1
7	Analysis of drill stem test	1	2	b1,b2,c2,c3,d1
8	Analysis of injection well testing.	1	2	b1,b2,c2,c3,d1
9	Test Design and Planning	1	2	b1,b2,c1,c2,c3,d1
10	Practical Exam	1	2	b1,b2, c1,c2
اجمالي الأسابيع والساعات الفعلية Number of Weeks /and Contact Hours Per Semester		14	28	

استراتيجيات التعليم والتعلم Teaching Strategies
<ul style="list-style-type: none"> • Discussions • Group discussions • Group working • Lecture • Problem solving • Project • Self-learning • Tutorial • Video



Tasks and Assignments الأنشطة والتكليفات

م No	التكليف/ الواجب Assignments/ Tasks	نوع التكليف (فردى/ تعاوني)	الدرجة المستحقة Mark	أسبوع التنفيذ Week Due	خرجات التعلم CLOs (symbols)
1	Homeworks	Individual	5	2,4,6,8,10,12	b1,b2.c1,c2,c3
2	Project	Cooperative	10	11	b1,b2.c1,c2,c3 , d1
Total Score إجمالي الدرجة			15		

Learning Assessment تقييم التعلم

الرقم No.	أنشطة التقييم Assessment Tasks	أسبوع التقييم Week due	الدرجة Mark	نسبة الدرجة إلى الدرجة النهائية Proportion of Final Assessment	مخرجات التعلم CLOs (symbols)
1	Tasks and Assignments	2,4,6,8,10,11,12	15	10%	b1,b2.c1,c2,c3, d1
2	Quiz	6	2	1%	a1,a2, a3
3	Midterm Exam	8	20	13%	a1,a2, a3,b1,b2,c2
4	Quiz	9	3	2%	a1,a2, a3
5	Final Exam (practical)	14	10	7%	b1,b2, c1,c2
6	Final Exam (theoretical)	16	100	67%	a1,a2, a3,b1,b2,c1,c2
Total الإجمالي			150	%100	

Learning Resources مصادر التعلم

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

- 1- John Lee, John B. Rollins and John P. Spivey, 2003, Pressure Transient Testing, SPE Textbook Series, Vol. Henry L. Doherty Memorial Fund of AIME, Society of Petroleum Engineers, Richardson, Texas.
- 2- Horne R. N, (1995), Modern Well Test Analysis, 2nd edition. Petroway Inc., USA.

Essential References المراجع المساندة

- 1-Dominique Bourdet, 2002, Well Test Analysis: The Use of Advanced Interpretation Models", Handbook of Petroleum Exploration and Production, Vol.3, Elsevier, Amsterdam.
- 2-Amanat U. Chaudhry, 2003, Gas Well Testing Handbook Advanced TWPSOM Petroleum Systems, , Inc., Elsevier Inc, Houston, Texas.
- 3- Daltaban T.S. and C.G. Wall,1998, Fundamental and Applied Pressure Analysis, Reservoir Modeling Divis Imperial College Press, London.

Electronic Materials and Web Sites etc. المصادر الإلكترونية ومواقع الإنترنت

- 1-[https://en.wikipedia.org/wiki/Well_test_\(oil_and_gas\)](https://en.wikipedia.org/wiki/Well_test_(oil_and_gas))
- 2-petrowiki.org/Well_test

Prepared by
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& Quality Assurance Center
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- 3- <https://www.testwells.com/well-test-analysis>
4- oilpro.com/q/3162/well-test-analysis-and-interpretation
5- https://wiki.aapg.org/Pressure_transient_testing
6- www.fekete.com

Course Policies الضوابط والسياسات المتبعة في المقرر

1	<p><u>Class Attendance</u> <u>حضور الفعاليات التعليمية</u></p> <ul style="list-style-type: none"> - A student should attend not less than 75 % of total hours of the subject; otherwise he/she will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring a proof statement from university Clinic. If the absent is more than 25% of a course total contact hours, student will be required to retake the entire course again
2	<p><u>Tardy</u> <u>الحضور المتأخر</u></p> <ul style="list-style-type: none"> - For late in attending the class, the student will be initially notified. If he repeated lateness in attending class, he/she will be considered as absent.
3	<p><u>Exam Attendance/Punctuality</u> <u>ضوابط الامتحان</u></p> <ul style="list-style-type: none"> - A student should attend the exam on time. He/she is permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam.
4	<p><u>Assignments & Projects</u> <u>التعيينات والمشاريع</u></p> <ul style="list-style-type: none"> - In general one assignment is given to the students after each chapter; the student has to submit all the assignments for checking on time, mostly one week after given the assignment.
5	<p><u>Cheating</u> <u>الغش</u></p> <ul style="list-style-type: none"> - For cheating in exam, a student will be considered as fail. In case the cheating is repeated three times during his/her study the student will be disengaged from the Faculty.
6	<p><u>Plagiarism</u> <u>الانتحال</u></p> <ul style="list-style-type: none"> - Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proofed a plagiarism of a student, he/she will be disengaged from the Faculty. The final disengagement of the student from the Faculty should be confirmed from the Student Council Affair of the university or according to the university roles.
7	<p><u>Other policies</u> <u>سياسات أخرى</u></p> <ul style="list-style-type: none"> - Mobile phones are not allowed to use during a class lecture. It must be closed; otherwise the student will be asked to leave the lecture room. - Mobile phones are not allowed in class during the examination. - Lecture notes and assignments might be given directly to students using soft or hard copy.



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قسم/ برنامج: هندسة النفط والغاز الطبيعي
العام الجامعي: 2019-2020م

خطة مقرر: اختبار الابار Course Plan (Syllabus): Well Testing

معلومات عن أستاذ المقرر						
الاسم Name	Prof. Abbas Mohamed Abdo Al-Khudafi		الساعات المكتبية (أسبوعياً) Office Hours			
المكان ورقم الهاتف Location & Telephone No.	Hadhramout University 967-770254579 967739678710		السبت SAT	الأحد SUN	الاثنين MON	الثلاثاء TUE
البريد الإلكتروني E-mail	prof.abuahmad@yahoo.com					
			الأربعاء WED	الخميس THU		

معلومات عامة عن المقرر						
1.	اسم المقرر Course Title	Well Testing				
2.	رمز المقرر ورقمه Course Code and Number	PNGE 434				
3.	الساعات المعتمدة للمقرر Credit Hours	الساعات المعتمدة Credit Hours			الإجمالي Total	
		محاضرات Lecture	عملي Practical	سمنار/تمارين Seminar/Tutorial		تدريب Training
		2	0	1	0	3
4.	المستوى والفصل الدراسي Study Level and Semester	Fourth Semester/second semester				
5.	المتطلبات السابقة للمقرر Pre-requisites	PNGE 351				
6.	المتطلبات المصاحبة (إن وجدت) Co-requisite	NA				
7.	البرنامج الذي يدرس له المقرر Program (s) in which the course is offered	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 of Petroleum and Natural Resources				

وصف المقرر

The course provides students with the theory and practice of deliverability and pressure transient testing of oil and gas wells. topics included in this course are: introduction to well testing, basic concepts of fluid flow in porous media, pressure drawdown testing techniques for oil wells , pressure buildup analysis techniques for oil wells, injection well transient testing and analysis, modern well testing , other type of oil well tests, gas well testing, well test planning and execution.

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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 behavior of infinite – acting and bounded reservoirs, the various flow regimes and boundary effects.	-a1
a2. Recognize the concept of superposition and its applications in space and time.	-a2
a3. Identify different types of tests and reservoir type.	-a3
b1. Compare between transient test and deliverability test.	- b1
b2. Differentiate between reservoir and non-reservoir behaviors	- b2
c1. Conduct test design of oil and gas well.	-c1
c2. Analyze pressure transient and deliverability test to determine the reservoir and well characteristics of oil and gas wells.	-c2
c3. Use computer program package for pressure transient well test.	-c3
d1. Write report in well test analysis and interpretation.	-d1

Course Content محتوى المقرر

Theoretical Aspect خطة تنفيذ الموضوعات النظرية				
الرقم Order	الوحدات (الموضوعات الرئيسية) Units	الموضوعات التفصيلية Sub Topics	الأسبوع Week Due	الساعات الفعلية Con. H
1	Introduction to well testing	<ul style="list-style-type: none"> Role of Oil Well Tests and Information in Petroleum Industry Well test objectives Well Test Data Acquisition 	1	2
2	Basic concepts of fluid flow in porous media	<ul style="list-style-type: none"> Superposition Wellbore-storage Radius of investigation Skin effect Flow regimes 	2	2
3	Pressure	<ul style="list-style-type: none"> Introduction 	3	2

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	Drawdown Testing Techniques for Oil Wells	<ul style="list-style-type: none"> • Single rate test • Two rate tests • Multi-rate tests 	4	2
4	Pressure Buildup Analysis Techniques for Oil Wells	<ul style="list-style-type: none"> • Ideal buildup • Actual buildup • Analysis and interpretation methods 	5	2
		<ul style="list-style-type: none"> • Estimation methods of original and Average Reservoir Pressure (MBH-method and Muskat method) 	6	2
5	Injection Well Transient Testing and Analysis	<ul style="list-style-type: none"> • Introduction • Injectivity Test Analysis Methods • Pressure Fall-off Test Analysis Methods • Two-rate Injectivity Test Analysis • Step-rate Injectivity Testing 	7	2
6	Mid-term exam	▪	8	2
7	Modern well testing	<ul style="list-style-type: none"> • Pressure Derivative • Horizontal well test 	9	2
		<ul style="list-style-type: none"> • Fundamentals of Type Curve Matching Methods for Oil Wells • Ramey's type curve • McKinley type curve • Gringarten et all type curve 	10	2
8	Other type of oil well tests	<ul style="list-style-type: none"> • Drill-stem Testing Methods • Wireline Formation Test Data Evaluation 	11	2
		<ul style="list-style-type: none"> • Interference and pulse testing 	12	
9	Gas Well Testing	<ul style="list-style-type: none"> • Pseudopressure (Real Gas Potential) Treatment • Turbulent Flow Factor • Conventional and Isochronal Gas Well Tests 	13	2
		<ul style="list-style-type: none"> • Isochronal Test • Modified Isochronal Test • Drawdown or Falloff Test • Buildup Test 	14	2
10	Well Test Planning and Execution.	<ul style="list-style-type: none"> • Measurement of Pressures • Bottomhole Mechanical Downhole-Recording Gauges • Bottomhole Electronic Surface-Recording Gauges • Bottomhole Electronic Downhole-Recording Gauges • Planning a Well Test 	15	2
11	Final Exam		16	2
عدد الأسابيع والساعات الفعلية Number of Weeks /and Contact Hours Per Semester			16	32



Practical / Training/ Tutorials/ Exercises Aspects خطة تنفيذ موضوعات الجانب العملي			
الرقم Order	موضوعات العملي/ المهام / التمارين Practical/ Tutorials/ Exercises Aspects	الأسبوع Week Due	الساعات الفعلية Cont. H
1	Analysis of flow test of oil well	1,2	4
2	Multi-rate tests analysis	3,4	4
3	Pressure Buildup Analysis Techniques for Oil Wells	5,6	4
4	Analysis Using Type Curves matching	7	2
5	Analysis and Interpretation of gas well testing	8,9	4
6	Analysis and interpretation of interference test and Pulse test	10	2
7	Analysis of drill stem test	11	2
8	Analysis of injection well testing.	12	2
9	Test Design and Planning	13	2
10	Practical Exam	14	2
اجمالي الأسابيع والساعات الفعلية Number of Weeks /and Contact Hours Per Semester		14	28

Teaching Strategies استراتيجيات التعليم والتعلم	
<ul style="list-style-type: none"> - Discussions - Group discussions - Group working - Lecture - Problem solving - Project - Self-learning - Tutorial - Video 	

Tasks and Assignments الأنشطة والتكليفات				
م No	التكليف/ الواجب Assignments	نوع التكليف (فردى/ تعاوني)	الدرجة المستحقة Mark	أسبوع التنفيذ Week Due
1	Homeworks	Individual	5	2,4,6,8,10,12
2	Project	Cooperative	10	11
Total Score إجمالي الدرجة			15	

Learning Assessment تقويم التعلم				
م	أساليب التقويم	موعد (أسبوع) التقويم Week Due	الدرجة Mark	الوزن النسبي % Proportion of Final
	Prepared by Assoc.Prof. Adel Al- Matary	Quality Assurance Unit Assoc.Prof. Adel Al-Matary	Dean of the Faculty Assoc.Prof. Bassim AlKhirbash	Dean of the Development & Quality Assurance Center Assoc.Prof. Huda Al-Emad



No	Assessment Method			Assessment
1	الأنشطة والتكليفات Tasks and Assignments	2,4,6,8,10,11,12	15	10%
2	كوز (1) Quiz	6	2	1%
3	اختبار نصف الفصل Midterm Exam	8	20	13%
4	كوز (2) Quiz	9	3	2%
5	اختبار نهاية الفصل (عملي) Final Exam (practical)	14	10	7%
6	اختبار نهاية الفصل (نظري) Final Exam (theoretical)	16	100	67%
المجموع Total			150	100 %

مصادر التعلم Learning Resources

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

- 1- John Lee, John B. Rollins and John P. Spivey, 2003, Pressure Transient Testing, SPE Textbook Series, V Henry L. Doherty Memorial Fund of AIME, Society of Petroleum Engineers, Richardson, Texas.
- 2- Horne R. N, (1995), Modern Well Test Analysis, 2nd edition. Petroway Inc., USA.

المراجع المساندة Essential References

- 1-Dominique Bourdet, 2002, Well Test Analysis: The Use of Advanced Interpretation Models", Handbook of Petroleum Exploration and Production, Vol.3, Elsevier, Amsterdam.
- 2-Amanat U. Chaudhry, 2003, Gas Well Testing Handbook Advanced TWPSOM Petroleum Systems, , Inc., Elsevier Inc, Houston, Texas.
- 3- Daltaban T.S. and C.G. Wall, 1998, Fundamental and Applied Pressure Analysis, Reservoir Modeling Div Imperial College Press, London.

المصادر الإلكترونية ومواقع الإنترنت Electronic Materials and Web Sites etc.

- 1-[https://en.wikipedia.org/wiki/Well_test_\(oil_and_gas\)](https://en.wikipedia.org/wiki/Well_test_(oil_and_gas))
- 2-petrowiki.org/Well_test
- 3- <https://www.testwells.com/well-test-analysis>
- 4-oilpro.com/q/3162/well-test-analysis-and-interpretation
- 5-https://wiki.aapg.org/Pressure_transient_testing
- 6-www.fekete.com

الضوابط والسياسات المتبعة في المقرر Course Policies

1	Class Attendance حضور الفعاليات التعليمية - A student should attend not less than 75 % of total hours of the subject; otherwise he/she will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring a proof statement from university Clinic. If the absent is more than 25% of a course total contact hours, student will be required to retake the entire course again
2	Tardy الحضور المتأخر - For late in attending the class, the student will be initially notified. If he repeated lateness in attending class, he/she will be considered as absent.
3	Exam Attendance/Punctuality ضوابط الامتحان

Prepared by
Assoc.Prof. Adel Al-
Matary

Quality Assurance Unit
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Dean of the Faculty
Assoc.Prof. Bassim
AlKhirbash

Dean of the Development
& Quality Assurance Center
Assoc.Prof. Huda Al-Emad

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



	<p>- A student should attend the exam on time. He/she is permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam.</p>
4	<p>Assignments & Projects <u>التعيينات والمشاريع</u></p> <p>- In general one assignment is given to the students after each chapter; the student has to submit all the assignments for checking on time, mostly one week after given the assignment.</p>
5	<p>Cheating <u>النش</u></p> <p>- For cheating in exam, a student will be considered as fail. In case the cheating is repeated three times during his/her study the student will be disengaged from the Faculty.</p>
6	<p>Plagiarism <u>الانتحال</u></p> <p>- Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proofed a plagiarism of a student, he/she will be disengaged from the Faculty. The final disengagement of the student from the Faculty should be confirmed from the Student Council Affair of the university or according to the university roles.</p>
7	<p>Other policies <u>سياسات أخرى</u></p> <p>- Mobile phones are not allowed to use during a class lecture. It must be closed; otherwise the student will be asked to leave the lecture room. - Mobile phones are not allowed in class during the examination. - Lecture notes and assignments might be given directly to students using soft or hard copy.</p>