**نموذج وصف المقرر**

**وصف المقرر**

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| يوفر وصف المقرر هذا إيجازاً مقتضياً لأهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهناً عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ولابد من الربط بينها وبين وصف البرنامج. |

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| 1. المؤسسة التعليمية | كلية الهندسة/ جامعة بغداد |
| 1. القسم الجامعي / المركز | قسم هندسة النفطالقسمالعلمي |
| 1. اسم / رمز المقرر | PE-404- Enhanced Oil Recovery-EOR |
| 1. البرامج التي يدخل فيها |  |
| 1. أشكال الحضور المتاحة | Annual System; The mode is a “Day Program”. The students are full time on  Campus. They attend full day program in  Face-to-face mode. The academic year is  Composed of 30-week regular subjects.  Each graduating student has to successfully complete 90 hours. |
| 1. الفصل / السنة | الاول والثاني |
| 1. عدد الساعات الدراسية (الكلي) | 3 ساعات اسبوعيا |
| 1. تاريخ إعداد هذا الوصف | 15-5-2018 |
| 1. أهداف المقرر | |
| 1. تعليم الطلبة المادة العلمية الكاملة في الاختصاص | |
| 1. التمكن من حل المشاكل النفطية في الحقل وأجراء التصاميم الصحيحة للابار والمكامن النفطية | |
| ج- توسيع أدراك الطالب في معلومات علمية أكبر ليكون جاهزا للدخول في التعليم العالي والدراسات العليا | |
| The Students will get the advance knowledge of essential subjects in improved oil recovery and calculation methods used in EOR., the student will get good information in reservoir management solutions, as follows | |
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| 1. مخرجات التعلم وطرائق التعليم والتعلم والتقييم |
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| أ- المعرفة والفهم  أ**1 Ability to apply knowledge of science, and engineering.**  **2 Ability to design and conduct experiments and to analyze and interpret data.**  **3 Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety.**  **4 Ability to function on multi-disciplinary teams.**  **5 Ability to identify, formulate, and solve engineering problems.**  **6 Understanding of professional and ethical responsibility.**  **7 Ability to communicate effectively.**  **8 A knowledge of contemporary issues.**  **9 An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.**  **10 An ability to deal with the high level of uncertainty in definition and solution of petroleum reservoir problems.** |
| ب -  ب2 -  ب3 -  ب4- |
| طرائق التعليم والتعلم  Face to face learning and provides some practical lessons to enhance students skill |
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| طرائق التقييم |
| . **Homework**:  - There will be a minimum of seven sets of homework during the academic year.  - There will be usual tests for students to encourage the follow up the lessons.  - The homework will count 10% of the total course grade while the test is an adding grades.  **2. Quizzes:**  - There will be a four closed books and notes quizzes during the academic year.  - The quizzes will count 20% of the total course grade.  **3. Exams:**  - There will be four closed books and notes exam during the academic year,  **4. Final Exam:**  - The final exam will be comprehensive, closed books and notes, and will take  3 hours long.  - The final exam will count 70% of the total course grade. |
| ج- |
| طرائق التعليم والتعلم |
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| طرائق التقييم |
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| د - المهارات العامة والمنقولة ( المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي ).  د1-Improve students ability to complete works  د3-  د4- |

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| 1. بنية المقرر | | | | | | |
| الأسبوع | الساعات | مخرجات التعلم المطلوبة | اسم الوحدة / المساق أو الموضوع | طريقة التعليم | طريقة التقييم |
|  | 3 |  | Principles and definitions | Enriched discussion & posters |  |
|  | 3 |  | **Choice of proper methods for EOR** | Enriched discussion |  |
|  | 3 |  | **Recovery by water displacement** | Discussion and several home works |  |
|  | 6 |  | **Buckley and Leverett method** | Discussion and practical home works |  |
|  | 3 |  | **Welge method** | Discussion and several home works |  |
|  | 6 |  | Stiles method | Discussion and practical home works |  |
|  | 6 |  | **Original and improved Dykstra Parsons method** | **Application** |  |
|  | 3 |  | **Pattern of flooding** | Enriched discussion |  |
|  | 3 |  | Properties of injected waters | Enriched discussion |  |
|  | 6 |  | Recovery by immiscible gas | Enriched discussion |  |
|  | 6 |  | Tarner and Muskat methods | Discussion and practical home works |  |
|  | 6 |  | Recovery by miscible gas | Discussion and practical home works |  |
|  | 3 |  | Dry and enriched gas injection | Enriched discussion |  |
|  | 6 |  | CO2 and N2 injection | Enriched discussion |  |
|  | 6 |  | Thermal recovery and heat flow through rocks | Discussion and practical home works |  |
|  | 6 |  | Steam injection and Insitu combustion |  |  |
|  | 3 |  | Tertiary oil recovery |  |  |
|  | 3 |  | Surfactant flooding |  |  |

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| 1. البنية التحتية | | |
| القراءات المطلوبة :   * النصوص الأساسية * كتب المقرر * أخرى | Enhanced Oil Recovery  Advance Reservoir Engineering  Petroleum Recovery  The Practice of Reservoir Engineering  The Design Eng Aspects of Water Flooding |
| متطلبات خاصة ( وتشمل على سبيل المثال ورش العمل والدوريات والبرمجيات والمواقع الالكترونية ) | Perform several seminars and presentation |
| الخدمات الاجتماعية ( وتشمل على سبيل المثال محاضرات الضيوف والتدريب المهني والدراسات الميدانية ) |  |