**Course Description Form**

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| 1. Course Name:
 |
| Renewable Energy  |
| 1. Course Code:
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| 1. Semester / Year:
 |
| Semester 2023/2024 |
| 1. Description Preparation Date:
 |
|  14/2/2024 |
| 1. Available Attendance Forms:
 |
| Attendance only |
| 1. Number of Credit Hours (Total) / Number of Units (Total)
 |
| 30 hours per semester. 2 hours per week |
| 1. Course administrator's name (mention all, if more than one name)
 |
| Name: Assis. Prof. RABEE KASIM THAJEELEmail: Rabee.thajeel@uobasrah.edu.iq |
| 1. Course Objectives
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| **Course Objectives** | At the end of the semester, the student should have knowledge of the following: 1- Concepts of renewable energies 2- Forms and characteristics of renewable energies 3- The benefits of renewable energy from the environmental, social and economic aspects 4- Methods of exploiting and using renewable energies 5- The negatives that accompany the production and use of renewable energy and ways to treat them 6- Knowing the policies and tools to encourage production from renewable energy sources |
| 1. Teaching and Learning Strategies
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| **Strategy** | By providing the student with the basics and additional topics related to educational outcomes, assigning students to joint research, collecting information from various sources, exchanging scientific material and its sources with each other, and forming open discussion circles on the vocabulary studied. |
| 1. Course Structure
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| **Week**  | **Hours**  | **Required Learning Outcomes**  | **Unit or subject name**  | **Learning method**  | **Evaluation method**  |
| 123456789101112131415 | 2 hours | The relationship of energy to sustainable development The importance of renewable energy in general Contributions of renewable energy to the global energy mix and sustainable development goalsIts types, advantages, methods of exploitation and disadvantages Its types, advantages, methods of exploitation and disadvantages Its types, advantages, methods of exploitation and disadvantages Its types, advantages, methods of exploitation and disadvantages Concepts, advantages and disadvantagesObstacles to its spread and obstacles to investment in Arab countriesConcepts, advantages and disadvantagesThe policy of compulsory quotas and green certificates, its advantages and disadvantagesTypes, concepts and toolsComparing renewable energy with conventional energy in terms of benefits and costsReasons and Opportunities and ingredients justifications | Motives for adopting alternative sources of energy The concept of renewable energy and its general characteristics The sustainability of the world's energy system solar energy Wind Energy electricity Bioenergy Bio energy, ocean energy and wave movement Obstacles to the widespread use of renewable energy sourcesThe main policies to encourage production from renewable energy sourcesThe main policies to encourage production from renewable energy sourcesComplementary policies to encourage production from renewable energy sourcesThe economic, social and environmental cost-effectiveness of renewable energy sourcesDeveloping renewable energy sources in oil-producing countriesThe reality of renewable energy in Iraq | lecturelecturelectureLecturelecturelecturelecturelecturelectureLecturelecturelecturelecturelecturelecture  | daily preparationoral examsdaily preparationoral examsReportsdaily preparationoral examsFirst semester examdaily preparation oral examsdaily preparationdaily preparationoral examsReports Second half exam |
| 1. Course Evaluation
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| 50 marks for monthly and daily semester exams by monitoring student participation and observing students’ performance in answering questions and other assignments, and 50 marks for final exams. |
| 1. Learning and Teaching Resources
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| Required textbooks (curricular books, if any) |  |
| Main references (sources) | 1- سمير سعدون وآخرين، الطاقة البديلة مصادرها واستخداماتها، 2018، نسخة الكترونية  3-  |
| Recommended books and references (scientific journals, reports...) | - احمد جابر بدران ، التنمية الاقتصادية والتنمية المستدامة، 2014.- وليد الاشوح ، التنمية المستدامة بين النظرية والتطبيق، 2017 .- مدحت أبو النصر، ياسمين مدحت محمد، التنمية المستدامة مفهومها ابعادها مؤشراتها،2017. |
| Electronic References, Websites | -المستقبل الذي نصبو إليه: رؤية العراق للتنمية المستدامة 2030<https://andp.unescwa.org/ar/plans/1143>- بوابة اهداف التنمية المستدامة<https://arabsdggateway-ar.unescwa.org/>- اهداف التنمية المستدامة في العراق<https://iraq.un.org/ar/sdgs>- اهداف التنمية المستدامة في العمل في العراق<https://www.undp.org/ar/iraq/>  |