**Course Description Form**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Course Name: | | | | | | | | |
| Electromagnetic Fields | | | | | | | | |
| 1. Course Code: | | | | | | | | |
|  | | | | | | | | |
| 1. Semester / Year: | | | | | | | | |
| 2nd semester / 2nd year | | | | | | | | |
| 1. Description Preparation Date: | | | | | | | | |
| 19/3/2024 | | | | | | | | |
| 1. Available Attendance Forms: | | | | | | | | |
| In Classroom | | | | | | | | |
| 1. Number of Credit Hours (Total) / Number of Units (Total) | | | | | | | | |
| 30hours/2 unit | | | | | | | | |
| 1. Course administrator's name (mention all, if more than one name) | | | | | | | | |
| Name: ridha mohammed zaki  Email: [ridha.mohammed@uowa.edu.iq](mailto:ridha.mohammed@uowa.edu.iq) | | | | | | | | |
| 1. Course Objectives | | | | | | | | |
| **Course Objectives** | | | | | 1. Study the fundamental principles of electromagnetic fields  2. Gives the students the knowledge in basic of electromagnetic fields that is need in several objects courses in later years | | | |
| 1. Teaching and Learning Strategies | | | | | | | | |
| **Strategy** | | Lectures, Presentations, Recitation and Documentations | | | | | | |
| 1. Course Structure | | | | | | | | |
| **Week** | **Hours** | | **Required Learning Outcomes** | | | **Unit or subject name** | **Learning method** | **Evaluation method** |
| 1-2 | 2 | |  | | | Electrostatic Fields Coulomb's Law and Electric Field strength Field Due to a Continuous Volume Charge Distribution | Lectures+ tutorials | Daily test and oral questions |
| 3-4 | 2 | |  | | | Electric Flux Density Flux Lines, Displacement Density Gauss's Law | Lectures+ tutorials | Daily test and oral questions |
| 5-6 | 2 | |  | | | ENERGY AND POTENTIAL   CONDUCTORS AND DIELECTRICS | Lectures+ tutorials | Daily test and oral questions |
| 7-8 | 2 | |  | | | Capacitor, Inductor | Lectures+ tutorials | Daily test and oral questions |
| 9-10 | 2 | |  | | | STEADY MAGNETIC FIELD | Lectures+ tutorials | Daily test and oral questions |
| 11-12 | 2 | |  | | | MAGNETIC FORCES, MATERIALS, AND INDUCTANCE | Lectures+ tutorials | Daily test and oral questions |
| 13 | 2 | |  | | | ELECTROMAGNET FIELDS | Lectures+ tutorials | Term exam |
| 1. Course Evaluation | | | | | | | | |
| Term exam- 10%, Quizzes+oral exam- 15%, reports & homeworks- 10%, attendance- 5%, final exam- 60% | | | | | | | | |
| 1. Learning and Teaching Resources | | | | | | | | |
| William H. Hayt and Joun A. Buck, "Engineering Elecrtomagnetic". | | | | | | | | |
| Sadiku, "Elements of Electromagnetic". | | | | | | | | |
| Joseph A. Edminister, "Electromagnetics | | | | | | | | |
|  | | | |  | | | | |