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| **College :** | **Engineering** |
| **Programme** | **Electrical Engineering** |
| **Course :** | **Electromagnetic I** |

**Course Report**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Institution : | Al Majmaah University | | Date of CR | 9/ 5/ 2017 |
| College/ Department | | Engineering/ Electrical Engineering | | |

**A Course Identification and General Information**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Course title: | | Electromagnetic I | | | | | Code: | | | EE 206 | | | Section | | | 407 | | |
| 2. Name of course instructor | | | | Dr Yazeed Qasaymeh | | | | | | | Location : | | | College of Engineering | | | | |
| 3. Year and semester to which this report applies: | | | | | | | | | | 2016/2017 Second Semester | | | | | | | | |
| 4. Number of students starting the course? | | | | | | 17 | | Students completing the course? | | | | | | | | | 14 |  |
| 5. Course components: | | | | | | | | | | | | | | | | | | |
|  | Lecture | | Tutorial | | Laboratory/  Studio | | | | Practical | | | Other | | | **Total** | | | |
| **Contact**  **Hours** | 45 | | 15 | | 0 | | | | 0 | | | 0 | | | 60 | | | |
| **Credit** | 3 | | 0 | | 0 | | | | 0 | | | 0 | | | 3 | | | |

**B- Course Delivery :**

**1. Coverage of Planned Program**

|  |  |  |  |
| --- | --- | --- | --- |
| **Topics Covered** | **Planned** Contact Hours | **Actual** Contact Hours | **Reason for Variations (\*)** |
| Vector Algebra | 4 | 4 | ………………………………….. |
| Coordinate system and transformation | 8 | 8 | ………………………………….. |
| Vector calculus | 4 | 4 | ………………………………….. |
| Electrostatic fields | 12 | 12 | ………………………………….. |
| Electric field in material space | 8 | 4 | ………………………………….. |
| Electrostatic boundary-value problem | 4 | 4 | ………………………………….. |
| Magneto-static field | 12 | 4 | Based on the instructions of ministry of higher education the semester was cut shorted. |
| Magnetic force material and devices | 8 | 4 | Based on the instructions of ministry of higher education the semester was cut shorted. |

( \* ) if there is a difference of more than 25% of the hours planned

**2. Consequences of Non-Coverage of Topics**

|  |  |  |
| --- | --- | --- |
| Topics not Fully Covered  (if any) | Effected Learning Outcomes | Possible Compensating Action |
| None | ………………………………. | ………………………………. |

**3. Course learning outcome assessment.**

| **List course learning outcomes** | | **List methods of assessment for each LO** | **Summary analysis of assessment results for each LO** |
| --- | --- | --- | --- |
|  | **Knowledge** | | |
|  | **.....................................................................** | .................. | .................. |
|  | **Cognitive Skills** | | |
| **e** | Relate the electrostatic field definition | Standardized Exams | 50%  [Final exam Q6] |
| Identify the electric field in material space |
| Identify magneto-static fields |
| **c** | Produce electric potential using charge distribution using Poisson equation | Standardized exams | 47.61%  [Final exam Q5] |
| Employ magnetic vector potential equation in determining the current density |
|  | **Interpersonal Skills & Responsibility** | | |
|  | **.....................................................................** | .................. | .................. |
|  | **Communication, Information Technology, Numerical** | | |
| **a** | Recognize the basic vector algebra | Standardized Exams | 73.8%  [Final exam Q1] |
| Perform the transformation between coordinate system |
| Identify the vector calculus derivation and integration |
| **k** | Relate the electric fields on boundary interface | Standardized Exams | 54.76%  [Final exam Q3] |
| Predict the electric fields on a region using the principle of image theory |
| Determine the magnetic fields on boundary interface |
|  | **Psychomotor** | | |
|  | **.....................................................................** | .................. | .................. |

**Summarize any actions you recommend for improving teaching strategies as a result of evaluations in table 3 above.**

|  |
| --- |
| The text and reference books problems will be used as self-homework’s related to each topic of the course. |

**4. Effectiveness of Planned Teaching Strategies for Intended Learning Outcomes set out in the Course Specification**

|  |  |  |  |
| --- | --- | --- | --- |
| List Teaching Methods set out in Course Specification | Were They  Effective? | | Difficulties Experienced (if any) in Using the Strategy and Suggested Action to Deal with Those Difficulties. |
| No | Yes |
| Giving Lectures |  | X | NO |

**C. Results**

**1. Distribution of Grades**

|  |  |  |  |
| --- | --- | --- | --- |
| Letter  Grade | Number of  Students | Student  Percentage | Analysis of Distribution of Grades |
| **A+** | 0 | 0% | No Students get A+ grade |
| **A** | 1 | 5.88% | Only one students get A grade |
| **B+** | 0 | 0% | No Students get B+ grade |
| **B** | 1 | 5.88% | Only one students get B grade |
| **C+** | 1 | 5.88% | Only one students get C+ grade |
| **C** | 3 | 17.64% | Three students get C plus |
| **D+** | 2 | 11.76% | Two students get D+ grade |
| **D** | 3 | 17.64% | Three students get D grades |
| **F** | 3 | 17.64% | Three student performs weak and fail the course |
| Denied  Entry | 2 | 11.76% | Two students were banned to enter the final exam |
| In Progress | 0 | 0% | ………………………………………….. |
| Incomplete | 0 | 0% | ………………………………………….. |
| Pass | 11 | 64.70% | Eleven students passed the course |
| Fail | 3 | 17.64% | Three students failed |
| Withdrawn | 1 | 5.88% | One student withdrawn the course |

**2. Analyze special factors (if any) affecting the results**

|  |
| --- |
| The results are within the normal distribution and pass percentage is good. |

**3. Variations from planned student assessment processes (if any) .**

a. Variations (if any) from planned assessment schedule (see Course Specifications)

|  |  |
| --- | --- |
| Variation | Reason |
| Midterm 2 was not given | According to the instructions of the ministry of higher education, the semester was short cut. |

b. Variations (if any) from planned assessment processes in Domains of Learning

|  |  |
| --- | --- |
| Variation | Reason |
| Midterm 2 was not given | According to the instructions of the ministry of higher education, the semester was short cut. |

**4. Student Grade Achievement Verification :**

|  |  |
| --- | --- |
| Method(s) of Verification | Conclusion |
| All papers are reviewed by independent reviewer from the department who will who will double check the sum of the total marks | Level of fairness of collection is fairly high |
| Grades approved by Head of department and the college vice dean of academic affair | Approved |

**D. Resources and Facilities**

|  |  |
| --- | --- |
| Difficulties in access to resources  or facilities (if any) | Consequences of any difficulties experienced for student learning in the course |
| None |  |

**E. Administrative Issues**

|  |  |
| --- | --- |
| Organizational or administrative difficulties encountered (if any) | Consequences of any difficulties experienced for student learning in the course |
| None |  |

**F Course Evaluation**

**1 Student evaluation of the course (Attach summary of survey results)**

|  |
| --- |
| a. List the most important recommendations for improvement and strengths   * The course evaluation survey shows that the students are fairly agree with course delivery   and contents |
| b. Response of instructor or course team to this evaluation   * The course instructor is glad that the students are agreed with course delivery |

**2. Other Evaluation:**

|  |
| --- |
| a. List the most important recommendations for improvement and strengths   * ……………………………………………………………………………………………… * ……………………………………………………………………………………………… * ……………………………………………………………………………………………… * ……………………………………………………………………………………………… |
| b. Response of instructor or course team to this evaluation:   * ……………………………………………………………………………………………… * ……………………………………………………………………………………………… * ……………………………………………………………………………………………… * ……………………………………………………………………………………………… |

**G Planning for Improvement**

**1. Progress on actions proposed for improving the course in previous course reports (if any).**

|  |  |  |  |
| --- | --- | --- | --- |
| Actions recommended  from the most recent course report(s) | Actions Taken | Action Results | Action Analysis |
| 1. Mathematical Exercise | More exercises were solved from textbook and reference book during class time and given as homework | The students showed a better understanding of electromagnetic definitions and concepts | ……………… |
| 1. Student Participation | The students were more involved during the theory explanation and solving the examples. | Student improved their skills in getting answers and perform accurate calculations compared to the semester beginning | ……………… |
| 1. Micro-Projects | The students were asked to design and present a prototyped micro-project that related the theory into practice | The students were able to relate the theory to practice during their presentation of the microproject | ……………… |

**2. List what other actions have been taken to improve the course**

|  |
| --- |
| * Force the students to use both the textbook and the reference book for solving self homework. * Previous semesters exam model answers were provided to the students using D2L. |

**3. Action Plan for Next Semester/Year**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Actions Recommended for Further Improvement | Intended Action Points  (should be measurable) | Start  Date | Completion  Date | Person Responsible |
| 1. More exercise | More exercises will be given to students to improve their mathematical skills and theoretical understanding | Beginning of Second semester 2017/2018 | End of Second semester 2017/2018 | Course Instructor |
| 1. More student participation | Ask student to complete solving some problems to the end during the class using calculator | Beginning of Second semester 2017/2018 | End of Second semester 2017/2018 | Course  Instructor |
| 1. Self home-work | After each example has to be solved in the class, the students will be given a self home work for more practicing | Beginning of Second semester 2017/2018 | End of Second semester 2017/2018 | Course  Instructor |
| 1. Micro-projects | The students will be asked for micro-projects for the purpose of relating theory to practice | Beginning of Second semester 2017/2018 | End of Second semester 2017/2018 | Course  Instructor |

**Course Instructor:**

|  |  |  |  |
| --- | --- | --- | --- |
| Name: | Dr Yazeed Qasaymeh | | |
| Signature: | ............................. | Date Report Completed: | 9/ 5 / 2017 |

**Program Coordinator:**

|  |  |  |  |
| --- | --- | --- | --- |
| Name: | Dr Abdullah Almuhasien | | |
| Signature: | ............................. | Date Received : | / / 2017 |

**Important Notes :**

* A separate Course Report (CR) should be submitted for every course and for each ( section " Male & Female" or Academic Programme or campus location where the course is taught ) even if the course is taught by the same person
* Each CR is to be completed by the course instructor (Separate reports attached ) and given to the program coordinator At the end of each course
* Course Reports are to discuss by the academic ( Programme ) Department Council