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| **College :** | **ENGINEERING** |
| **Programme** | **ELECTRICAL** |
| **Course :** | **EE212** |

**Course Report**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Institution : | Majmaah University | | Date of CR | 4 / 5/ 2017 |
| College/ Department | | Engineering / Electrical | | |

**A Course Identification and General Information**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Course title: | | Basic Electronic Devices and Circuits Lab | | | | | Code | | | EE 212 | | | Section | | | 411 | | |
| 2. Name of course instructor | | | | Dr. Yazeed Mohammad | | | | | | | Location : | | | Yahyah Campus | | | | |
| 3. Year and semester to which this report applies: | | | | | | | | | | 2016-2017 FALL SEMESTER | | | | | | | | |
| 4. Number of students starting the course? | | | | | | 11 | | Students completing the course? | | | | | | | | | 10 |  |
| 5. Course components: | | | | | | | | | | | | | | | | | | |
|  | Lecture | | Tutorial | | Laboratory/  Studio | | | | Practical | | | Other | | | **Total** | | | |
| **Contact**  **Hours** | **………..** | | **………..** | | **30** | | | | **………..** | | | **………..** | | | **30** | | | |
| **Credit** | **………..** | | **………..** | | **1** | | | | **………..** | | | **………..** | | | **1** | | | |

**B- Course Delivery :**

**1. Coverage of Planned Program**

|  |  |  |  |
| --- | --- | --- | --- |
| **Topics Covered** | **Planned** Contact Hours | **Actual** Contact Hours | **Reason for Variations (\*)** |
| The Introduction to laboratory equipment and basic components. | 2 | 2 | ………………………………….. |
| Diode Characteristics | 2 | 2 | ………………………………….. |
| Diode Application as Rectifier (Half wave Mid Point ) | 2 | 2 | ………………………………….. |
| Diode Application as Rectifier (Full Wave ) + Smoothing/Filtering | 2 | 2 | ………………………………….. |
| Silicon Diode Application as Clipper/ Clamper+ Zener Diode  Characteristics and voltage Stabilization | 4 | 4 | ………………………………….. |
| Project1 (Hardware + Sftware) AM Receiver Circuit/ Power Supply | 4 | 8 | ………………………………….. |
| Transistor I/O Characteristics | 2 | 2 | ………………………………….. |
| Transistor(Common Emitter, Common Base, Common Collector) | 4 | 2 | ………………………………….. |
| Transistor as an Amplifier and Switch | 2 | 0 | Based on the instructions of ministry of higher education the semester was cut shorted. |
| Characteristics of MOSFET | 2 | 0 | Based on the instructions of ministry of higher education the semester was cut shorted. |
| Common Source (CS)MOSFET Amplifier | 2 | 0 | Based on the instructions of ministry of higher education the semester was cut shorted. |
| MOS Digital Circuit (MOS inverter Circuits) | 2 | 0 | 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 |
| Transistor as an Amplifier and Switch  Characteristics of MOSFET  Common Source  (CS)MOSFET Amplifier  MOS Digital Circuit (MOS inverter Circuits) | Even though some of the CLOs were not fully covered, all of the SLOs were measured during the semester | Students has studied the theoretical background of these topics as Basic Electronic Devices and Circuits (EE 111) is a pre-request for the lab |

**3. Course learning outcome assessment.**

| **List course learning outcomes** | | **List methods of assessment for each LO** | **Summary analysis of assessment results for each LO** |
| --- | --- | --- | --- |
| **1.0** | **Knowledge** | | |
| **…** | .................. | .................. | .................. |
| **2.0** | **Cognitive Skills** | | |
| **b** | Conduct experiment in order to identify the T\_V characteristics of diodes, BJT and FET | Standardized exams | 84.84  [Final Exam Q2] |
| Conduct experiment to analyze the operation of diode based circuits such as rectifier, voltage stabilization, clipping and clamping |
| Conduct experiment to analyze the operation of different BJTs configuration |
| Conduct experiment to analyze the operation of different FETs configuration |
| **3.0** | **Interpersonal Skills & Responsibility** | | |
| **3.1** | **.....................................................................** | .................. | .................. |
| **4.0** | **Communication, Information Technology, Numerical** | | |
| **k** | Distinguish different tools to conduct experiments for diode and transistors | Standardized exams | 96.96  [Final Exam Q1] |
| Conduct experiment in order to identify the T\_V characteristics of diodes, BJT and FET |
| Conduct experiment to analyze the operation of diode based circuits such as rectifier, voltage stabilization, clipping and clamping |
| Conduct experiment to analyze the operation of different BJTs configuration |
| Conduct experiment to analyze the operation of different FETs configuration |
| Distinguish different tools to conduct experiments for diode and transistors |
| **5.0** | **Psychomotor** | | |
| **5.1** | **.....................................................................** | .................. | .................. |

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

|  |
| --- |
| * The assigned teaching strategies can be further improved by giving the students more assignments on Multisim software. |

**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 |
| Explain and Discuss each topic in detail at the beginning of the lab with the help of diagrams, mathematical expression |  | Yes |  |
| Experimental Demonstration |  | Yes |
| Group work |  | Yes |
| Troubleshooting |  | Yes |

**C. Results**

**1. Distribution of Grades**

|  |  |  |  |
| --- | --- | --- | --- |
| Letter  Grade | Number of  Students | Student  Percentage | Analysis of Distribution of Grades |
| **A+** | 0 | 0% | ……………………………………………………….. |
| **A** | 0 | 0% | ……………………………………………………….. |
| **B+** | 0 | 0% | ……………………………………………………….. |
| **B** | 2 | 18.18% | Two Students get B grade |
| **C+** | 3 | 27.27% | Three Students get C+ grade |
| **C** | 3 | 27.27% | Three Students get C+ grade |
| **D+** | 2 | 18.18% | Two Students get D+ grade |
| **D** | 0 | 0% | ……………………………………………………….. |
| **F** | 0 | 0% | ……………………………………………………….. |
| Denied  Entry | 0 | 0% | ……………………………………………………….. |
| In Progress | 0 | 0% | ……………………………………………………….. |
| Incomplete | 0 | 0% | ……………………………………………………….. |
| Pass | 10 | 90.9% | Ten students pass the course |
| Fail | 0 | 0% | ……………………………………………………….. |
| Withdrawn | 1 | 9.1% | One student withdrawn the course |

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

|  |
| --- |
| * None |

**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 final papers are reviewed by independent reviewer from the department who double check the sum of total mark | Level of fairness in correction is high |

**D. Resources and Facilities**

|  |  |
| --- | --- |
| Difficulties in access to resources  or facilities (if any) | Consequences of any difficulties experienced for student learning in the course |
| It's not a standard lab facility | Lack of professional environment |

**E. Administrative Issues**

|  |  |
| --- | --- |
| Organizational or administrative difficulties encountered (if any) | Consequences of any difficulties experienced for student learning in the course |
| LAB Cleanliness | Students loose interest |

**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. Safety measures | The problem highlighted to LDC. Follow the ISO standard. |  |  |
| 1. Repair Multi meter | The problem highlighted to LDC. Need fuses and battery. |  |  |

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

|  |
| --- |
| * The students kept up to date with lab regulations, examinations and any other related 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 |
| Maintenance of faulty lab devices and equipment | LDC | Beginning of first semester 2017/2018 | End of first semester 2017/2018 | LDC |

**Course Instructor:**

|  |  |  |  |
| --- | --- | --- | --- |
| Name: | Dr. Yazeed Mohammad | | |
| Signature: | ............................. | Date Report Completed: | 4/5/2017 |

**Program Coordinator:**

|  |  |  |  |
| --- | --- | --- | --- |
| Name: | Dr. Abdullah Almuhaisen | | |
| 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