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| **College:** | **College of Engineering** |
| **Programme** | **Electrical Engineering** |
| **Course:** | **Logic Design**  **EE 208** |

**Course Report**

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| --- | --- | --- | --- | --- |
| Institution: | Majmaah University | | Date of CR | 06/02/2017 |
| College/ Department | | College of Engineering / Electrical Engineering Department | | |

**A Course Identification and General Information**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Course title: | | Logic Design | | | | | Code | | | EE 208 | | | | Section | | 549 | | |
| 2. Name of course instructor: | | | | Dr. Muhammad Zubair | | | | | | | Location: | | Yahya Campus | | | | | |
| 3. Year and semester to which this report applies: | | | | | | | | | | 2016/2017 First Semester | | | | | | | | |
| 4. Number of students starting the course? | | | | | | 7 | | Students completing the course? | | | | | | | | | 6 |  |
| 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 (\*)** |
| Introduction to course syllabus and distribution of marks | 4 | 4 | No Variations |
| Introduction to Number System, Binary, Octal, Decimal and Hexadecimal numbers and base conversions, Complements, binary Codes | 8 | 8 | No Variations |
| Boolean Functions, Basic Logic Gates (OR, AND & NOT, NOR, NAND XOR & XNOR Gates) | 8 | 8 | No Variations |
| Adder & Subtractor | 8 | 8 | No Variations |
| Decoders & Encoders | 4 | 4 | No Variations |
| Multiplexers | 4 | 4 | No Variations |
| Code Converters | 4 | 4 | No Variations |
| Latches | 4 | 4 | No Variations |
| Flip-Flops | 4 | 4 | No Variations |
| Registers & Shift Registers | 8 | 8 | No Variations |
| Synchronous & Asynchronous Counters | 4 | 4 | No Variations |

( \* ) 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 |  |  |
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**3. Course learning outcome assessment.**

| **List course learning outcomes**  **By the end of the course, the student will be able to:** | | **List methods of assessment for each LO** | **Summary analysis of assessment results for each LO** |
| --- | --- | --- | --- |
| **a** | *Conversion of numbering systems* | Examination, quiz, assignments, micro project | 87 %  File Attached |
| *Develop Boolean algebra and logic gates* |
| *produce combinational logic circuits and Karnaugh maps* |
| **c** | *solve flip flops circuits with different kinds* | Examination, quiz, assignments, micro project | 80 %  File Attached |
| *solve registers and counters problems* |
| *solve sequential and synchronous circuits* |
| *solve asynchronous circuits and state machines* |
| **e** | *design logic circuit using logic gates and ICs* | Examination, quiz, assignments, micro project | 87 %  File Attached |

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

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**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 |
| Lecture, debate, small group work, whole group and small group discussion, research  activities, projects, debates, role playing, case studies, memorization and individual presentation |  | x | All of these teaching strategies were helpful to complete the outcomes of the course. |
| lab demonstrations | x |  | A separate lab course is present in the program so lab demonstration should be removed from the teaching strategies of this course. |
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**C. Results**

**1. Distribution of Grades**

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| --- | --- | --- | --- |
| Letter  Grade | Number of  Students | Student  Percentage | Analysis of Distribution of Grades |
| **A+** | 1 | 16.67 % | The result is within good uniform distribution. |
| **A** | 2 | 33.33 % |
| **B+** | 1 | 16.67 % |
| **B** | 0 | 0 % |
| **C+** | 0 | 0 % |
| **C** | 1 | 16.67 % |
| **D+** | 0 | 0 % |
| **D** | 0 | 0 % |
| **F** | 1 | 16.67 % |
| Denied  Entry | 0 | 0 |  |
| In Progress | 0 | 0 |  |
| Incomplete | 0 | 0 |  |
| Pass | 5 | 71.43 % |  |
| Fail | 1 | 14.29 % |  |
| Withdrawn | 1 | 14.29 % |  |

**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 |
| None |  |
|  |  |
|  |  |

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

|  |  |
| --- | --- |
| Variation | Reason |
| None |  |
|  |  |
|  |  |

**4. Student Grade Achievement Verification:**

|  |  |
| --- | --- |
| Method(s) of Verification | Conclusion |
| Internal grades verification reviewer | Reviewed |
| Grades approved by Head of department and the dean of the College of Engineering | Approved |
| Microsoft Excel and Edugate are used for verifications of sum. | Verified |

**D. Resources and Facilities**

|  |  |
| --- | --- |
| Difficulties in access to resources  or facilities (if any) | Consequences of any difficulties experienced for student learning in the course |
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**E. Administrative Issues**

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

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

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| --- |
| a. List the most important recommendations for improvement and strengths  No Recommendations |
| b. Response of instructor or course team to this evaluation  NA |

**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 |
| More micro projects should be assigned on individual basis to involve the students in Micro-projects | Students were assigned on individual basis in micro projects | All students were able to make and complete the micro project. | Students are now able to design and implement logic circuits on bread boards |
| Seminars, trainings should be arranged related to the course topics and micro projects | Students were given lecture on importance, design and debugging in logic design | Students took more interest in the course. Students were able to use tools to perform debugging in their micro project circuits | Student learnt the lifelong skills of debugging electric circuits. |
| Group discussions should be more encouraged | Group discussions were more encouraged during the class | Students were able to learn various topics in a more comfortable fashion. | Students were able to achieve high grades. |

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

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

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| --- | --- | --- | --- | --- |
| Actions Recommended for Further Improvement | Intended Action Points  (should be measurable) | Start  Date | Completion  Date | Person Responsible |
| More interactive approaches should be implemented in giving the lectures to enhance the learning of students. | Interactive teaching methods should be used | Feb 2017 | Jun 2017 | Course Instructor |
|  |  |  |  |  |
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**Course Instructor:**

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| --- | --- | --- | --- |
| Name: | Dr. Muhammad Zubair | | |
| Signature: |  | Date Report Completed: | 06/02/2017 |

**Program Coordinator:**

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| --- | --- | --- | --- |
| Name: |  | | |
| Signature: |  | Date Received: | 06/02/2017 |

**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