**COURSE SPECIFICATION**

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| This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification. |

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| University of Baghdad | 1. Teaching Institution |
| College of Engineering/ Electronics and Communications Department | 2. University Department/Centre |
| Digital system design/ 321 ECDD | 3. Course title/code |
|  | 4. Programme(s) to which it contributes |
| In class face-to-face mode | 5. Modes of Attendance offered |
| 1st-2nd / 2015-2016 | 6. Semester/Year |
| 4 hrs per week/ 120 hrs total | 7. Number of hours tuition (total) |
| 5/4/2016 | 8. Date of production/revision of this specification |
| 9. Aims of the Course | |
| Teach the student the principles of logic circuit design. Including the design and implantation of combinational and sequential circuit using different techniques | |
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| 10· Learning Outcomes, Teaching ,Learning and Assessment Methode |
| 1. Knowledge and Understanding   A1. Basics of digital circuits  A2.  A3.  A4.  A5.  A6 . |
| B. Subject-specific skills  B1. Logic circuit analysis and design  B2.  B3. |
| Teaching and Learning Methods |
| 1- Lectures.  2- Tutorials.  3- Homework and  4- Mini project.  5- Tests and Exams.  6- In-Class Questions and Discussions |
| Assessment methods |
| 1. Quizzes: 5% 2. 1st term exam: 10% 3. 2nd term exam: 10% 4. Mini project 5% 5. Final exam: 70% |
| C. Thinking Skills  C1.  C2.  C3.  C4. |

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| D. General and Transferable Skills (other skills relevant to employability and personal development)  D1.  D2.  D3.  D4. |

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| 11. Course Structure | | | | | |
| Assessment Method | Teaching  Method | Unit/Module or Topic Title | ILOs | Hours | Week |
| Quiz/Exam | Lectures | Digital system in general and Digital system basic components |  | 10 | 1-2 |
| Quiz/Exam | Lectures | Combinational circuits |  | 20 | 3-8 |
| Quiz/Exam | Lectures | Sequential synchronous circuits |  | 20 | 9-14 |
| Quiz/Exam | Lectures | Algorithmic state machines |  | 20 | 15-19 |
| Quiz/Exam | Lectures | Sequential asynchronous circuits |  | 30 | 20-25 |
| Quiz/Exam | Lectures | Logic families |  | 4 | 26 |
| discussion | Lectures | Hardware Description Languages |  | 10 | 27-30 |

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| 12. Infrastructure | |
| DIGITAL DESIGN by M.Morris Mano | Required reading:  · CORE TEXTS  · COURSE MATERIALS  · OTHER |
| Multisim | Special requirements (include for example workshops, periodicals, IT software, websites) |
|  | Community-based facilities  (include for example, guest  Lectures , internship , field studies) |

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| 13. Admissions | |
| According **to** ministry requirements | Pre-requisites |
| 10 | Minimum number of students |
| 35 | Maximum number of students |