**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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| BAGHDAD | 1. Teaching Institution |
| ENERGY | 2. University Department/Centre |
| PRINCIPALS OF ELECTRICITY/101ENPE | 3. Course title/code |
| BACALORIOS | 4. Programme(s) to which it contributes |
| WEAKELY | 5. Modes of Attendance offered |
| YEARLY | 6. Semester/Year |
| 75 HOURS | 7. Number of hours tuition (total) |
| 2016 | 8. Date of production/revision of this specification |
| 9. Aims of the Course |
| Students will be have a good practical and theoretical information about D.C. and A.C. electrical circuits and their applications |
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| 10· Learning Outcomes, Teaching ,Learning and Assessment Method |
| 1. Knowledge and Understanding

1-Become adept at using various methods of circuit analysis, including simplifiedmethods such as series-parallel reductions, voltage and current dividers, and the node and mesh methods.2- Appreciate the consequences of linearity, in particular the principle of superpositionand Thevenin-Norton equivalent circuits. |
|  B. Subject-specific skills 1- Become adept at using various methods of circuit analysis, including simplifiedmethods such as series-parallel reductions, voltage and current dividers, and the node and mesh methods.2- Appreciate the consequences of linearity, in particular the principle of superpositionand Thevenin-Norton equivalent circuits. |
|  Teaching and Learning Methods |
| LecturesDiscussionApplication learning |
|  Assessment methods  |
| 1-homeworkes2-daily and monthly quizzes3-final exams |
| C. Thinking Skills C1.understanding C2.solve problemsC3.learning C4.  |
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| D. General and Transferable Skills (other skills relevant to employability and personal development) D1..give the student extra skills about engineeringElecrtical ccts.D2.give him an assessment skills about engineering system operation  |

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| 11. Course Structure |
| Assessment Method | TeachingMethod | Unit/Module or Topic Title | ILOs | Hours | Week |
| quizzeshomeworkexercisesreportcase studytests | 1- Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Introduction | Introduction | 3 | 1 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Units and Notations | Units and Notations | 3 | 2 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Resistance | Resistance | 3 | 3 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Ohm’s Law | Ohm’s Law | 3 | 4 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | D.C. Series Circuits | D.C. Series Circuits | 3 | 5 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | D.C. Parallel Circuits | D.C. Parallel Circuits | 3 | 6 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Kirchhoff’s Voltage Law | Kirchhoff’s Voltage Law | 3 | 7 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Kirchhoff’s Current Law | Kirchhoff’s Current Law | 3 | 8 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Current Sources | Current Sources | 3 | 9 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Sources Conversion | Sources Conversion | 3 | 10 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Mesh and Nodal Analysis | Mesh and Nodal Analysis | 3 | 11 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | ∆-Y and Y-∆ conversions | ∆-Y and Y-∆ conversions | 3 | 12 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Superposition Theorem | Superposition Theorem | 3 | 13 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Thevenin’s Theorem | Thevenin’s Theorem | 3 | 14 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Norton’s Theorem | Norton’s Theorem | 3 | 15 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Maximum Power Transfer Theorem | Maximum Power Transfer Theorem | 3 | 16 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Sinusoidal and Alternating Waves | Sinusoidal and Alternating Waves | 3 | 17 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Response of basic resistor,inductor and capacitor elements to sin voltage  | Response of basic resistor,inductor and capacitor elements to sin voltage  | 3 | 18 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Complex Numbers | Complex Numbers | 3 | 19 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Series and Parallel A.C. Circuits | Series and Parallel A.C. Circuits | 3 | 20 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Phase Drawing | Phase Drawing | 3 | 21 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Mesh and Nodal Analysis | Mesh and Nodal Analysis | 3 | 22 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | ∆-Y and Y-∆ conversions | ∆-Y and Y-∆ conversions | 3 | 23 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Superposition Theorem | Superposition Theorem | 3 | 24 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Thevenin’s Theorem | Thevenin’s Theorem | 3 | 25 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Norton’s Theorems | Norton’s Theorems | 3 | 26 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Max. Power Transfer Theorems | Max. Power Transfer Theorems | 3 | 27 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Resonance | Resonance | 3 | 28 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Resonance | Resonance | 3 | 29 |
| quizzeshomeworkexercisesreportcase studytests | Detailed lecture notes .2- Preparation and participation will be important for learning notes(you will be responsible for studying the notes prior each lecture).3- Several active learning techniques.4- Homework problems will be assigned | Resonance | Resonance | 3 | 30 |

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| 12. Infrastructure |
| 1. Introductory Circuit Analysis by Robert L.Boylestand 5th edition Merril Publishing Company 1987.2. Electrecal Circuits Fundamentals by Thomas L.Floyd 8th edition Prentice Hall 2010.3. and Basic Electrical Engineering by B.L.Theraja 2008. | Required reading:· CORE TEXTS· COURSE MATERIALS· OTHER |
| Internet websites  | Special requirements (include for example workshops, periodicals, IT software, websites) |
|  | Community-based facilities(include for example, guestLectures , internship , field studies) |

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| 13. Admissions |
|  | Pre-requisites |
|  | Minimum number of students |
|  | Maximum number of students |