Republic of Iraq

Ministry of Higher Education & Scientific Research

Supervision and Scientific Evaluation Directorate

Quality Assurance and Academic Accreditation

International Accreditation Dept.

Academic Program Specification Form For The Academic Year 2017-2018

University: Baghdad

College : Engineering

Number Of Departments In The College : 12 Twelve

Date Of Form Completion : April – 3 / 2018

Dean ’s Name

Date : / 4 / 2018

Signature

Dean ’s Assistant For Scientific Affairs

Date : / / 2018

Signature

The College Quality Assurance And University Performance Manager

Date : / / 2018

Signature

Quality Assurance And University Performance Manager

Date : / / 2018

Signature

**TEMPLATE FOR COURSE SPECIFICATION**

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| HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW |

**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 may 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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|  College of EngineeringUniversity of Baghdad | ***1. Teaching Institution*** |
| Mechanical Engineering Department (MED) | ***2. University Department/Centre*** |
| **Principles of production engineering**:(ME104)**Course Syllabus**Classification of engineering materials, Production of iron, Production of steel, Production of cast iron, Type of steel, Production of nonferrous metals, Physical and mechanical properties of metals, Destructive testing, Non- destructive testing, Mechanism of solidification, Detection of defects, Measuring and marking out, Machining of metals, Casting processes, Metal forming processes, Powder metallurgy, plastic, Ceramic materials, classes, Joining of metals, Industrial safety. | ***3. Course title/code& Description*** |
| ME-Programme leading to Bsc degree | ***4. Programme(s) to which it Contributes*** |
| Anual system | ***5. Modes of Attendance offered*** |
| year | ***6. Semester/Year*** |
| 5 hour in week ( 2 hour theoretical and 3 hour work shop) for each class  | ***7. Number of hours tuition (total)*** |
| April 2018 | ***8. Date of production/revision of this specification*** |
| ***9. Aims of the Course***  |
|  **teaching the student the basic knowledge he( or she) needs to be able to understand applicable problems concerning design next stages of his study or in daily work life**. and **to give basic fundamental knowledge to the student in the subject of production process and application in engineering industry .****.** |

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| ***10·Learning Outcomes***  |
|  Enable the student to Understand how to use the knowledge of this course which may be needed, to improving his ability in problems concerning applying basic mathematical and scientific concepts for the description and solution of engineering problems,developing initial proficiency in mechanical engineering disciplines,developing the ability to conduct experiments, and critically analyze and interpretdata,performing mechanical engineering integrated design of systems, components, orprocesses by means of practical experiences (group projects),identify, formulate, and solve mechanical engineering problems using modernengineering tools, techniques, and skills,collaborating in group projects,developing their written and oral communication skills through presentations ofproject results,acquiring an appreciation for some of the ethical problems that arise in the exerciseof the profession, |
| ***11.Teaching and Learning Methods*** |
| 1. Lectures.2. work shop.3. Homework and Assignments.4. Tests and Exams.5. In-Class Questions and Discussions.6. Connection between Theory and Application.7. Reports, Presentations, and Posters |
| ***12. Assessment Methods***  Home workClass activityexamOut of class activitiesPractice and exam in workshop   |
| ***13. Grading Policy*** 1. Quizzes: - There will be a eight closed books and notes quizzes during the academic semester. The quizzes will count 15% of the total course grade.  2. Exams: - There will be one closed books and notes exam during the academic year, The mid-term exam will count 5% of the total course grade.3- Workshop training  - There will be count 20 % of the total course grade. 4. Final Exam:  - The final exam will be comprehensive, closed books and notes, The final exam will count 60% of the total course grade. |

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| ***14. Course Structure*** |
|  |  |  |  |  | Week |
| 3 hour work shop | theoretical | 2hour |  | Classification of engineering materials Production of iron. | 1 |
| 3 hour work shop |  | 2hour |  | Production of iron. | 2 |
| 3 hour work shop | theoretical | 2hour |  | Production of steel, and Production of cast iron, and Type of steel. | 3 |
| 3 hour work shop |  | 2hour |  | , and Type of steel. | 4 |
| 3 hour work shop | = | 2hour |  | Production of nonferrous metals  | 5 |
| 3 hour work shop | = | 2hour |  | Production of nonferrous metals  | 6 |
| 3 hour work shop | = | 2hour |  | Exam +Physical and mechanical properties of metals | 7 |
| 3 hour work shop | = | 2hour |  | Destructive testing, and Non- destructive testing. | 8 |
| 3 hour work shop | = | 2hour |  | Mechanism of solidification, and Detection of defects. | 9 |
| 3 hour work shop | = | 2hour |  | Exam +Measuring and marking out | 10 |
| 3 hour work shop | = | 2hour |  | Metal removal by hand tools | 11 |
| 3 hour work shop | = | 2hour |  | Exam +Machining of metals  | 12 |
| 3 hour work shop | = | 2hour |  | Machining of metals | 13 |
| 3 hour work shop | = | 2hour |  | Exam + Casting processes  | 14 |
| 3 hour work shop | = | 2hour |  | Casting processes  | 15 |
| 3 hour work shop | = | 2hour |  | Exam +Metal forming processes | 16 |
| 3 hour work shop | = | 2hour |  | Metal forming processes, and Powder metallurgy. | 17 |
| 3 hour work shop | = | 2hour |  | Exam + plastic classes | 18 |
| 3 hour work shop | = | 2hour |  | Exam +Joining of metals | 19 |
| 3 hour work shop |  | 2hour |  | classes | 20 |
| 3 hour work shop | = | 2hour |  | Exam +Industrial safety | 21 |
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| ***15. Infrastructure*** |
| 1. kahtan khalf, & Adil mahmod," Principles of Production Engineering",1987.
2. Dr.Ahmed A.Al-kafaji,"Lectures about all terms of the subject ",2013-2014.
3. Dr.Salah Ameen,DrWaleed Mohamed, and Dr. Talab Hussain,"Material Engineering Properties",1990.
4. Dr.Qahtan Al-Khazraji, and Abdaljowad Sharif,"Welding Technology",1989.
5. Dr. Mohamed Al-Tornechi,and Dr.Mahdy Saeed,"Cutting Tool's Principles",1988.
6. Dr.Shakir K. Al- Saammrai ,and Dr.Qahtan Al-Khazraji,"Fundimentals of Metallurgy Enginneering",1990.
7. Serope Kalpakjian, and Stepen Schmid,"Manufacturing Engineering Technology",2009.
 | Required reading:· CORE TEXTS· COURSE MATERIALS· OTHER |
| ***16. Admissions*** |
|   | Pre-requisites |
| 30  | Minimum number of students |
|  35 | Maximum number of students |
| ***Lecturer Kawakeb Abdulraheem*** | ***17. Course Instructors*** |

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