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

Universitiy: Baghdad

College : Engineering

Number Of Departments In The College : 12 Twelve

Date Of Form Completion : May – 1/9/2017

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Dean ’s Name

Date : 1 / 9 / 2017

Signature

Dean ’s Assistant For Scientific Affairs

Date : 1 / 9 / 2017

Signature

The College Quality Assurance And University Performance Manager

Date : 1 / 9 / 2017

Signature

Quality Assurance And University Performance Manager

Date : 1 / 9 / 2017

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 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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| Engineering College | ***1. Teaching Institution*** |
| University of Baghdad/ Department of Surveying | ***2. University Department/Centre*** |
| Practical Astronomy | ***3. Course title/code & Description*** |
| BSc in Surveying Eng. (3rd Stage) | ***4. Programme(s) to which it Contributes*** |
| Annual | ***5. Modes of Attendance offered*** |
| 2017-2018 | ***6. Semester/Year*** |
| 120 | ***7. Number of hours tuition (total)*** |
|  | ***8. Date of production/revision of this specification*** |
| ***9. Aims of the Course*** | |
| The Practical Astronomy course aims to introduce the history of astronomy in engineering measurements, define the motion of heavenly bodies, and time system. The main purpose of this course is how to fix the terrestrial position based on the astronomical observations using different astronomical coordinate systems. | |

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| ***10·*** ***Learning Outcomes*** |
| The third year students should deliver a complete knowledge and practical experience (office and field skilles) of applying the theories of practical astronomies to introduce the terrestrial positions based joining both of the different time system and the motion of the celestial bodies ( stars, Moon, Sun, satellites, etc…….) |
| ***11.*** ***Teaching and Learning Methods*** |
| Lectures, tutorials, reports, and field work |
| ***12. Assessment Methods***  Exams (more than 1 exam for each semester+ several quizzes), technical reports. |
| ***13. Grading Policy***  Annual grades from exams, reports, field work, and grade from the final exam |

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| ***14. Course Structure*** | | | |
|  |  |  | Week |
| Introduction and definitions -1 |  |  | 1 |
| Introduction and definitions -2 |  |  | 2 |
| History of astronomy -1 |  |  | 3 |
| History of astronomy -2 |  |  | 4 |
| Spherical trigonometry -1 |  |  | 5 |
| Spherical trigonometry -2 |  |  | 6 |
| Spherical trigonometry -3 |  |  | 7 |
| Heavenly bodies |  |  | 8 |
| The earth as a heavenly body -1 |  |  | 9 |
| The earth as a heavenly body -2 |  |  | 10 |
| Aberration of star light |  |  | 11 |
| Proper motion |  |  | 12 |
| Magnitude and brightness |  |  | 13 |
| Astronomical coordinates |  |  | 14 |
| First semester exam |  |  | 15 |
| Systems of coordinates [Horizon system] |  |  | 16 |
| System of coordinates [Equatorial-hour angle system] |  |  | 17 |
| System of coordinates [Galactic system] |  |  | 18 |
| The astronomical triangle -1 |  |  | 19 |
| The astronomical triangle -2 |  |  | 20 |
| Solution of the astronomical triangle |  |  | 21 |
| Time Introduction and definitions -1 |  |  | 22 |
| Time Introduction and definitions -2 |  |  | 23 |
| The time [Sidereal time, Equation of time] -1 |  |  | 24 |
| The time [Sidereal time, Equation of time] -2 |  |  | 25 |
| The time [The relation between sidereal and solar time] -1 |  |  | 26 |
| The time [The relation between sidereal and solar time] -2 |  |  | 27 |
| The time [The relation between sidereal and solar time] -3 |  |  | 28 |
| The time [equation of time] |  |  | 29 |
| Second semester exam |  |  | 30 |

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| ***15. Infrastructure*** | | |
| The Practical Astronomer | Required reading:  · CORE TEXTS  · COURSE MATERIALS  · OTHER | |
| Field work, almanac computation software (online app.) | Special requirements (include for example workshops, periodicals, IT software, websites) | |
| NA | Community-based facilities  (include for example, guest  Lectures , internship , field studies) | |
| ***16. Admissions*** | | |
|  | | Pre-requisites |
| 15 | | Minimum number of students |
| 25 | | Maximum number of students |
| Dr. Oday Y. M Zeki | | ***17. Course Instructors*** |

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