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:

Date Of Form Completion: June – 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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| University of Baghdad | ***1. Teaching Institution*** |
| Engineering college - Surveying Dept. | ***2. University Department/Centre*** |
| The Spherical Tringle | ***3. Course title/code & Description*** |
| 2 stage | ***4. Programme(s) to which it Contributes*** |
| Semester | ***5. Modes of Attendance offered*** |
| Semester 2/ 2017 | ***6. Semester/Year*** |
| 30 hours | ***7. Number of hours tuition (total)*** |
| 1-9-2017 | ***8. Date of production/revision of this specification*** |
| ***9. Aims of the Course*** | |
| Lesson is designed to prepare students to be familiar with the details needed in the subsequent stages in many applications like (astronomy application, geodetic, map projections and cartography. so this lesson will be a mathematical support to these applications | |

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| ***10·*** ***Learning Outcomes*** |
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| ***11.*** ***Teaching and Learning Methods*** |
| A-Knowledge and Understanding  1. Locate position  2. Compute the distance  3. Compute direction  4. Short distance  5. Navigation  B- Discussion ,explain and example |
| ***12. Assessment Methods***  Exam, homework , class work |
| ***13. Grading Policy***  30% Theoretical : 2-3 semesters exam , 2-3 quiz , Home work 10  60% Final Exam |

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| ***14. Course Structure*** | | | | | |
| Assessment Method | Teaching  Method | Unit/Module or Topic Title |  | Hours | Week |
| Exam | Discussion | Introduction to spherical Trigonometry, definitions |  | 2 | 1 |
|  | Example | Spherical Excess, derived laws |  | 2 | 2 |
|  |  | Spherical Triangles and great circles |  | 2 | 3 |
|  |  | Trigonometric laws for solving Spherical Triangles |  | 2 | 4 |
|  |  | Right angled angle and Napier’s rule |  | 2 | 5 |
|  |  | Earth as a sphere, paralles and meridians |  | 2 | 6 |
|  |  | Compute the distances along paralles and meridians. |  | 2 | 7 |
|  |  | Area of sector bounded by two parallels and two meridians. |  | 2 | 8 |
|  |  | Inclined angles, horizontal and vertical angles |  | 2 | 9 |
|  |  | Convergence of meridians |  | 2 | 10 |
|  |  | Coordinate systems: Geographic, Cartesian, and polar |  | 2 | 11 |
|  |  | Coordinate systems: rectangular and cartographic systems , transformations |  | 2 | 12 |
|  |  | Forward and Inverse Computations on spherical triangles |  | 2 | 13 |
|  |  | Intersection on sphere |  | 2 | 14 |
|  |  | Rotation of coordinates |  | 2 | 15 |
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| ***15. Infrastructure*** | | |
| - Spherical Triangles  -Shepherd F.A. (1982) “Advanced Engineering Surveying: problems and solution”1 st edition, Hodder Amold | Required reading:  · CORE TEXTS  · COURSE MATERIALS  · OTHER | |
|  | Special requirements (include for example workshops, periodicals, IT software, websites) | |
|  | Community-based facilities  (include for example, guest  Lectures , internship , field studies) | |
| ***16. Admissions*** | | |
| Pass first stage | | Pre-requisites |
| 20 student | | Minimum number of students |
| 50 student | | Maximum number of students |
| A.T. Omar Ali Ibrahim | | ***17. Course Instructors*** |

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