**TEMPLATE FOR PROGRAMME SPECIFICATION**

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| HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAM REVIEW |

**PROGRAMME SPECIFICATION**

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| This Program Specification provides a concise summary of the main features of the program 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 is supported by a specification for each course that contributes to the program. |

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| Ministry of Higher Education & Scientific Research | 1. Teaching Institution |
| Building & Construction Engineering Department/Building Engineering and Project Management Division | 2. University Department/Centre |
| Building Engineering and Project Management Division B.E.1 | 3. Program Title |
| B. Sc. In Building and Construction Engineering | 4. Title of Final Award |
| continuous | 5. Modes of Attendance offered |
| ABET | 6. Accreditation |
|  | 7. Other external influences |
| June 2017 | 8. Date of production/revision of this specification |
| 9. Aims of the Programme | |
| Students provide to wide knowledge in building and construction sectors generally and Building Engineering and Project Management specially. | |
| Students provide by true base in essentials concepts engineering of design and engineering analysis. | |
| Students graduate with high quality with understanding, knowledge, skills and personal features that requiring to do band of jobs in all fields of building and construction containing site engineers and specialization consultants and also researchers in Building Engineering and Project Management. | |
| Availability of Educational Milieu securing satisfy the academic requirements to ability the engineer to join to the scientific states concerning with civil engineering specialized with Building Engineering and Project Management . | |
| Ensuring the existence aware to safety affairs in construction sector and putting the procedures to follow it in the work with addition to search the legal way to it for application. | |

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| 10. Learning Outcomes, Teaching, Learning and Assessment Methods |
| 1. Knowledge and Understanding   A1.Preparation of practical engineers in the field of Building Engineering and Project Management .  A2. Prepare the students to supervise on civil works and projects, operating and maintenance, quality control, and check the suitability of materials involved in works.  A3. Enable students to learn and understand the practical applications of civil works and highways and bridges design associates with the academic programme  A4. A4- Enable the student to learn and understand the theoretical principles of methods used in civil engineering and Building Engineering and Project Management .  A5- Enable the student to learn and understand the methods of testing of materials in the civil work with the addition to learn the specification requirements to ensure the quality control.  A6- Enable the student to learn and understand the practical experiments of the civil engineering and especially in Building Engineering and Project Management . |
| B. Subject-specific skills  B1- Discussion and dialogue.  B2- Brain storming by encouraging students to produce a large number of ideas about some issue or problem raised during the lecture.  B3- Self-learning by teaching the student by his own according to his special abilities and mental and cognitive levels responding to his preferences and interests to achieve development and integration of his capabilities.  B4- Cooperative learning by team working.  B5- Competitive learning by creating a competition among peers. |
| Teaching and Learning Methods |
| Theoretical lectures, practical laboratory experiments, discussion and dialogue, brain storming, examples and questions used to achieve the goals. |
| Assessment methods |
| Daily exams, quizzes, documented examinations, quarterly exams, final exams, oral questions and discussions during the lectures, and home works. |
| C. Thinking Skills  C1- Data collection and analysis  C2- Methods of decision making  C3- Solving problems related to the Building Engineering and Project Management .  C4- Cooperative learning  C5- Competitive learning  C6- Group’s leadership in the field of work. |
| Teaching and Learning Methods |
| 1. Using the teaching staff member ability and experience in delivering the scientific material to the student.  2. Assigning students to prepare reports on a particular subject and thus motivate students to learn the initial principles of scientific research.  3. Assigning students to conduct laboratory experiments by their own after a simple explanation about the experiment procedures given by the lecturer, and thus a chance is available to the student to conclude and analyze the experiment results.  4. Adoption of the issue of scientific trips to various engineering projects for students as these trips will contribute to the expansion in the perceptions of students and the recognition of the work field. |
| Assessment methods |
| Daily exams, quizzes, documented examinations, quarterly exams, final exams, oral questions and discussions during the lectures, and home works. |

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| D. General and Transferable Skills (other skills relevant to employability and personal development)  D1- Increase communication between individuals, which contributes to building of a learning community.  D2- Development of the various emotional aspects such as nosiness and positive trend towards learning and social moral and independence in learning and self-confidence.  D3- Developing the skill aspects among students.  D4- Learning to identify the correct priorities for any problem.  D5- Development of the time respect and the time for completion and implementation of works.  D6- Development the spirit of fair competition between working groups in order to achieve work quality, excellence and diversity in performance.  D7- Development the spirit of creativity and innovation.  D8- Development of work appreciation and taking the responsibility and commitment. |
| Teaching and Learning Methods |
| Theoretical lectures, practical laboratory experiments, discussion and dialogue, brain storming, examples and questions used to achieve the goals. |
| Assessment Methods |
| Daily exams, quizzes, documented examinations, quarterly exams, final exams, oral questions and discussions during the lectures, and home works. |

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| 12. Awards and Credits | 11. Programme Structure | | | |
| Credit  hours | Course or Module Title | Course or  Module  Code | Level/Year |
|  | 3 | Mathematics 1 | B.E 1201 | First year/  First Semester |
| 3 | Eng. Mechanics 1 | B.E 1203 |
| 1 | physics | B.E 1206 |
| 2 | Engineering Drawing 1 | B.E 1207 |
| 1 | Engineering Geology 1 | B.E 1209 |
| 3 | Building Materials Technology 1 | B.E 1211 |
| 2 | Fundamental of Computer Science | B.E 1101 |
| 1 | Public Freedom and Democracy | B.E 1102 |
| 1 | Arabic Language | B.E 1106 |
| 2 | Workshops 1 | B.E 1104 |
| 3 | Mathematics (2) | B.E 1202 | First year/  Second Semester |
| 3 | Eng. Mechanics -2 | B.E 1204 |
| 2 | Chemistry | B.E 1205 |
| 3 | Building Materials Technology 2 | B.E 1212 |
| 1 | Civil Eng. Fundamentals | B.E 1213 |
| 2 | Engineering Drawing 2 | B.E 1208 |
| 1 | Engineering Geology 2 | B.E 1210 |
| 1 | Human Rights | B.E 1103 |
| 2 | English Language | B.E 1107 |
| 2 | Workshops 2 | B.E 1105 |
| 3 | Mathematics (3) | B.E 2214 | Second year/  First semester |
| 3 | Engineering Surveying (1) | B.E 2216 |
| 3 | Concrete Technology (1) | B.E 2218 |
| 3 | Strength of Materials (1) | B.E 2220 |
| 3 | Fluid Mechanics (1) | B.E 2222 |  |
| 2 | Computer Aided Eng. Drawing | B.E 2224 |
| 3 | Building Construction (1) | B.E 2227 |
| 2 | English Technical Language | B.E 2108 |
| 3 | Mathematics (4) | B.E 2215 | Second year/  Second semester |
| 3 | Engineering Surveying (2) | B.E 2217 |
| 3 | Concrete Technology (2) | B.E 2219 |
| 3 | Strength of Materials (2) | B.E 2221 |
| 3 | Fluid Mechanics (2) | B.E 2223 |
| 2 | Computer Programming | B.E 2225 |
| 2 | Building Construction (2) | B.E 2301 |
| 2 | Engineering Statistics | B.E 2226 |
| 3 | Soil Mechanics (1) | B.E 3228 | Third year/  First Semester |
| 2 | Building Services (1) | B.E 3238 |
| 2 | Engineering Analysis | B.E 3231 |
| 2 | Theory of Structures (1) | B.E 3233 |
| 2 | Principles of Remote Sensing (1) | B.E 3235 |
| 2 | Sanitary and Environmental Eng. (1) | B.E 3239 |
| 2 | Civil Eng. System Analysis (1) | B.E 3302 |
| 2 | Reinforced Concrete Design (1) | B.E 3234 |
| 2 | English Essay Writing Language | B.E 3109 |
| 1 | Leadership and Management Skills | B.E 3111 |
| 3 | Soil Mechanics (2) | B.E 3229 | Third year/  Second Semester |
| 2 | Numerical Analysis | B.E 3232 |
| 2 | Quality Control of Building Materials | B.E 3304 |
| 2 | Principles of Remote Sensing (2) | B.E 3236 |
| 2 | Reinforced Concrete Design (2) | B.E 3237 |
| 3 | Highway Engineering | B.E 3230 |
| 2 | Sanitary and Environmental Eng. (2) | B.E 3240 |
| 2 | Civil Eng. System Analysis (2) | B.E 3303 |
| 1 | Quality Control of Concrete | B.E 3305 |
| 1 | Sustainable Building Material | B.E 3306 |
| 4 | Management of Construction Projects | B.E.1401 | Fourth year |
| 6 | Concrete and Steel Design | B.E.1402 |
| 3 | Quantity Surveying and Management of Contracts | B.E.1403 |
| 2 | Structural Defects and Remedies | B.E.1404 |
| 2 | Engineering Economy | B.E.1405 |
| 3 | Computer Applications | B.E.1406 |
| 3 | Foundation Engineering | B.E.1407 |
| 3 | Building Services | B.E.1408 |
| 4 | Graduation Project | B.E.1409 |

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| 13. Personal Development Planning |
| 1. Knowledge of modern issues in civil engineering and Building Engineering and Project Management. 2. Developing the capability of using the techniques, skills, and new tools and apparatuses that required in various engineering practices |
| 14. Admission criteria . |
| * Success in all level/years * Completing the engineering training |
| 15. Key sources of information about the programme |
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| **Curriculum Skills Map** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Programme Learning Outcomes** | | | | | | | | | | | | | | | | | | | | | | | | | Core (C)  Title or Option  (O**)** | Course Title | Course  Code | Year / Level |
| General and Transferable Skills (or) Other skills relevant to employability and personal development | | | | | | | | Thinking Skills | | | | | | Subject-specific skills | | | | | Knowledge and  understanding | | | | | |
| **D8** | **D7** | **D6** | **D5** | **D4** | **D3** | **D2** | **D1** | **C6** | **C5** | **C4** | **C3** | **C2** | **C1** | **B5** | **B4** | **B3** | **B2** | **B1** | **A6** | **A5** | **A4** | **A3** | **A2** | **A1** |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Engineering Mechanics | B.E.1101 | First |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  |  |  |  | √ | √ | C | Mathematics (I) | B.E.1102 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Building Materials Technology | B.E.1103 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Engineering Drawing | B.E.1104 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | C | Engineering Geology | B.E.1105 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | C | Principles of Computers | B.E.1106 |
| √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Principles of Construction Management | B.E.1107 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Human Rights and Public Freedoms | B.E.1108 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | English Language Introduction | B.E.1109 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Workshops | B.E.1110 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | C | Strength of Materials | B.E.1201 | Second |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Mathematics (II) | B.E.1202 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Concrete Technology | B.E.1203 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Engineering Surveying | B.E.1204 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Fluid Mechanics | B.E.1205 |
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|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Engineering Analysis and Numerical Methods | B.E.1302 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Remote Sensing and GIS | B.E.1303 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Planning and Management Systems | B.E.1304 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Highway Engineering | B.E.1305 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | C | Management and Construction Equipment | B.E.1306 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Quality Control of Construction Operations | B.E.1307 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Theory of Structures | B.E.1308 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Sanitary Engineering | B.E.1309 |
| √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Management of Construction Projects | B.E.1401 | fourth |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Concrete and Steel Design | B.E.1402 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  |  | √ | √ | √ | √ | C | Quantity Surveying and Management of Contracts | B.E.1403 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  |  | √ | √ | √ | √ | C | Structural Defects and Remedies | B.E.1404 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | C | Engineering Economy | B.E.1405 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  |  |  | √ | √ | √ | C | Computer Applications | B.E.1406 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Foundation Engineering | B.E.1407 |
|  | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | C | Building Services | B.E.1408 |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ |  | √ | √ | √ | √ | √ | C | Graduation Project | B.E.1409 |