**BAYERO UNIVERSITY KANO**



**DEPARTMENT OF CIVIL ENGINEERING**

**FACULTY OF ENGINEERING**

**LIST OF COURSES**

**Level 100 Courses**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S/N** | **Course Code** | | **Course Title** | | **Credit Unit** | **Pre-requisite** |
| **FIRST SEMESTER** | | | | | | |
| 1 | CHM1231 | | Inorganic Chemistry | | 2 |  |
| 2 | CHM1241 | | Organic Chemistry | | 2 |  |
| 3 | CSC1201 | | Introduction to Computer Science | | 2 |  |
| 4 | MTH1301 | | Elementary Mathematics I | | 3 |  |
| 5 | STA1311 | | Probability I | | 3 |  |
| 6 | PHY1170 | | Physics Practical I | | 1 |  |
| 7 | PHY1210 | | Mechanics | | 2 |  |
| 8 | PHY1220 | | Electricity and Magnetism | | 2 |  |
| 9 | GSP1201 | | Use of English | | 2 |  |
| **Total Credits** | | | | | **19** |  |
| **SECOND SEMESTER** | | | | | | |
| 1 | | CHM1251 | | Physical Chemistry | 2 |  |
| 2 | | CHM1261 | | Practical Chemistry | 2 |  |
| 3 | | MTH1302 | | Elementary Mathematics II | 3 |  |
| 4 | | MTH1303 | | Elementary Mathematics III | 3 |  |
| 5 | | PHY1180 | | Physics Practical II | 1 |  |
| 6 | | PHY1230 | | Behaviour of Matter | 2 |  |
| 7 | | GSP1202 | | Use of Library, Study Skills and ICT | 2 |  |
| **Total Credits** | | | | | **15** |  |

**Level 200 Courses**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/N** | **Course Code** | | **Course Title** | **Credit Unit** | **Pre-requisite** |
| **FIRST SEMESTER** | | | | | |
| 1 | EGR2204 | | Workshop Practice | 2 |  |
| 2 | EGR2205 | | Thermodynamics I | 2 |  |
| 3 | EGR2206 | | Material Science I | 2 |  |
| 4 | EGR2207 | | Principles of Electrical Engineering I | 2 | PHY1220 |
| 5 | EGR2301 | | Engineering Mathematics I | 3 | MTH1301 |
| 6 | EGR2304 | | Laboratory A | 3 |  |
| 7 | EGR2306 | | Applied Mechanics | 3 |  |
| 8 | \*GSP2201 | | Use of English | 2 |  |
| 9 | GSP2204 | | Foundation of Nigerian Culture, Government and Economy | 2 |  |
| 10 | GSP2206 | | Peace Studies and Conflict Resolution | 2 |  |
| **Total Credits** | | | | **21/\*23** |  |
| 1 | | EGR2101 | Engineer in Society I | 1 |  |
| 2 | | EGR2102 | SWEP | 1 |  |
| 3 | | EGR2103 | Experimental Methods and Analysis | 1 |  |
| 4 | | EGR2201 | Fluid Mechanics I | 2 |  |
| 5 | | EGR2202 | Solid Mechanics I | 2 |  |
| 6 | | EGR2203 | Engineering Drawing I | 2 |  |
| 7 | | EGR2208 | Principles of Electrical Engineering II | 2 |  |
| 8 | | EGR2302 | Engineering Mathematics II | 3 |  |
| 9 | | EGR2305 | Laboratory B | 3 |  |
| 10 | | EGR2313 | Computer Programming | 3 | CSC1201 |
| 11 | | \*GSP2202 | Use of Library, Study Skills and ICT | 2 |  |
| 12 | | GSP2205 | Logic and Philosophy | 2 |  |
| **Total Credits** | | | | **22/\*24** |  |

\*For Direct Entry Students only

**Level 300 Courses**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **Course Code** | **Course Title** | **Credit Unit** | **Pre-requisite** |
| **FIRST SEMESTER** | | | | |
| 1 | CIV3303 | Fluid Mechanics II | 3 | EGR2201 |
| 2 | CIV3304 | Soil Mechanics | 3 |  |
| 3 | CIV3305 | Laboratory Practical A | 3 |  |
| 4 | CIV3308 | Strength of Materials | 3 | EGR2202 |
| 5 | CIV3309 | Structural Analysis I | 3 |  |
| 6 | CIV3401 | Engineering Geology | 4 |  |
| 7 | CIV3403 | Engineering Survey I | 4 |  |
| 8 | EGR3101 | Engineer in Society II | 1 |  |
| 9 | EGR3301 | Engineering Mathematic III | 3 | EGR2301 |
| **Total Credits** | | | **27** |  |
| **SECOND SEMESTER** | | | | |
| 1 | CIV3301 | Civil Engineering Practice | 3 |  |
| 2 | CIV3302 | Civil Engineering Materials | 3 | EGR2206 |
|  | CIV3306 | Laboratory Practical B | 3 |  |
|  | CIV3307 | Design of Structural Element I | 3 |  |
|  | CIV3402 | Civil Engineering Drawing | 4 | EGR2203 |
| 14 | EGR3102 | Technical Writing and Presentation | 1 |  |
| 15 | EGR3203 | SIWES I | 2 |  |
| 17 | EGR3302 | Computation Techniques | 3 | EGR2302 |
| 18 | EGR3311 | Computer Application | 3 | EGR2313 |
| 19 | EEP3201 | Entrepreneurship and Innovation | 2 |  |
| **Total Credits** | | | **27** |  |

**Level 400 Courses**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **Course Code** | **Course Title** | **Credit Unit** | **Pre-requisite** |
| **FIRST SEMESTER** | | | | |
| 1 | CIV4201 | Highway Engineering I | 2 | CIV3403 |
| 2 | CIV4202 | Structural Analysis II | 2 | CIV3309 &  EGR3301 |
| 3 | CIV4203 | Soil Mechanics II | 2 | CIV3304 |
| 4 | CIV4204 | Design of Structural Element II | 2 | CIV3307 |
| 5 | CIV4301 | Laboratory Practical | 3 |  |
| 6 | CIV4302 | Hydraulics/Hydrology | 3 | CIV3303 |
| 7 | CIV4303 | Engineering Surveying II | 3 | CIV3403 |
| 8 | CIV4304 | Civil Engineering Practice | 3 |  |
| 9 | EGR4201 | Engineering Statistics | 2 |  |
| 10 | EPP4201 | Venture Creation and Growth | 2 |  |
| **Total Credits** | | | **24** |  |
| **SECOND SEMESTER** | | | | |
| 1 | EGR4401 | SIWES II | 4 |  |
| **Total Credits** | | | **4** |  |

**Level 500 Courses**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **Course Code** | **Course Title** | **Credit Unit** | **Pre-requisite** |
| **FIRST SEMESTER** | | | | |
| 1 | CIV5202 | Public Health Engineering | 2 |  |
| 2 | CIV5310 | Laboratory Practical A | 3 |  |
| 3 | CIV5401 | Construction Management and Economics II | 4 | CIV4304 |
| 4 | CIV5404 | Transportation and Highway Engineering | 4 | CIV4201 |
| 5 | CIV5406 | Structural Analysis III | 4 | CIV4202 &  EGR3302 |
| 6 | Plus 3 credits option course | | 3 |  |
| **Total Credits** | | | **20** |  |
| **SECOND SEMESTER** | | | | |
| 1 | CIV5201 | Construction Management and Economics I | 2 |  |
| 2 | CIV5311 | Laboratory Practical B | 3 |  |
| 3 | CIV5402 | Geotechnical Engineering | 4 | CIV4203 |
| 4 | CIV5403 | Water Resources Engineering | 4 | EGR4201 |
| 5 | CIV5405 | Design of Structural Elements III | 4 | CIV4204 |
| 6 | CIV5601 | Final Year Project | 6 |  |
| 7 | Plus 3 credits option course | | 3 |  |
| **Total Credits** | | | **26** |  |

**Level 500 Option Courses**

|  |  |  |  |
| --- | --- | --- | --- |
| **S/N** | **Course Code** | **Course Title** | **Credit Units** |
| **1. Water Resources and Environmental Engineering** | | | |
| 1 | CIV5301 | Advanced Public Health Engineering | 3 |
| 2 | CIV5302 | Drainage and Irrigation Engineering | 3 |
| **TOTAL CREDITS** | | | **6** |
| **2. Geotechnical Engineering** | | | |
| 3 | CIV5303 | Rock Mechanics | 3 |
| 4 | CIV5304 | Advanced Foundation & Underground Construction | 3 |
| **TOTAL CREDITS** | | | **6** |
| **3. Structural Engineering** | | | |
| 5 | CIV5305 | Prestressed Concrete Design | 3 |
| 6 | CIV5306 | Analysis and Design of Timer Structures | 3 |
| **TOTAL CREDITS** | | | **6** |
| **4. Building/Construction Technology** | | | |
|  | CIV5304 | Advanced Foundation & Underground Construction | 3 |
|  | CIV5307 | Advanced Construction Technology | 3 |
| **TOTAL CREDITS** | | | **6** |
| **5. Transportation Engineering** | | | |
|  | CIV5308 | Rural and Urban Transportation Engineering | 3 |
|  | CIV5309 | Advanced Traffic Engineering | 3 |
| **TOTAL CREDITS** | | | **6** |