**Details of courses offered for Energy & Environment Engineering**

**(Be implemented from 2023 Fall onwards)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **FIRST YEAR (FIRST SEMESTER)** | | | | | |
| S. No | Course Code | Subject | Credit Hours | | |
| Th | Lab | Total |
| 1 | HUM-1002 | Pakistan Studies | 2 | 0 | 2 |
| 2 | HUM-1003 | Functional English | 3 | 0 | 3 |
| 3 | MATH-1004 | Calculus | 3 | 0 | 3 |
| 4 | EEE-1101 | Workshop Technology | 0 | 2 | 2 |
| 5 | EEE-1102 | Basic Electronics | 3 | 1 | 4 |
| 6 | EEE-1103 | Introduction to Environmental Engineering | 3 | 0 | 3 |
| **Total** | | | **14** | **3** | **17** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **FIRST YEAR (SECOND SEMESTER)** | | | | | |
| S. No | Course Code | Subject | Credit Hours | | |
| Th | Lab | Total |
| 1 | EEE-1104 | Energy Resources & Environment | 3 | 0 | 3 |
| 2 | EEE-1401 | Engineering Mechanics | 3 | 0 | 3 |
| 3 | EEE-1105 | Engineering Drawing and Computer Aided Design | 2 | 1 | 3 |
| 4 | EEE-1501 | Introduction to Computing | 2 | 1 | 3 |
| 5 | HUM-1001 | Islamic Studies | 2 | 0 | 2 |
| 6 | HUM-1004 | Technical Report Writing and Communication Skills | 3 | 0 | 3 |
| **Total** | | | **15** | **2** | **17** |

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| --- | --- | --- | --- | --- | --- |
| **SECOND YEAR (THIRD SEMESTER)** | | | | | |
| S. No | Course Code | Subject | Credit Hours | | |
| Th | Lab | Total |
| 1 | EEE-2106 | Environmental Microbiology | 2 | 1 | 3 |
| 2 | EEE-2107 | Engineering Thermodynamics | 3 | 1 | 4 |
| 3 | MATH-2006 | Differential Equations | 3 | 0 | 3 |
| 4 | EEE-2402 | Fluid Mechanics | 2 | 1 | 3 |
| 5 | EEE-2502 | Fundamentals of Programming | 2 | 1 | 3 |
| 6 | EEE-2108 | Engineering Materials | 2 | 0 | 2 |
| **Total** | | | **14** | **4** | **18** |

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| --- | --- | --- | --- | --- | --- |
| **SECOND YEAR (FOURTH SEMESTER)** | | | | | |
| S. No | Course Code | Subject | Credit Hours | | |
| Th | Lab | Total |
| 1 | EEE-2201 | Heat & Mass Transfer | 3 | 1 | 4 |
| 2 | EEE-2301 | Bio Energy Engineering | 2 | 1 | 3 |
| 3 | EEE-2302 | Fuels & Combustion | 3 | 1 | 4 |
| 4 | MATH-2005 | Complex Variable & Transforms | 3 | 0 | 3 |
| 5 | EEE-2303 | Hydro Power Engineering | 3 | 0 | 3 |
| **Total** | | | **14** | **3** | **17** |

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| --- | --- | --- | --- | --- | --- |
| **THIRD YEAR (FIFTH SEMESTER)** | | | | | |
| S. No | Course Code | Subject | Credit Hours | | |
| Th | Lab | Total |
| 1 | EEE-3202 | Geographical Information System & Remote Sensing | 2 | 1 | 3 |
| 2 | EEE-3203 | Power Plant Technology | 3 | 0 | 3 |
| 3 | EEE-3204 | Power Distribution & utilization System | 2 | 0 | 2 |
| 4 | EEE-3205 | Water supply and treatment methods | 3 | 1 | 4 |
| 5 | MATH-3003 | Probability & Statistics | 3 | 0 | 3 |
| 6 | EEE-3206 | Energy Conservation and Storage Technologies | 3 | 0 | 3 |
| **Total** | | | **16** | **2** | **18** |

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| --- | --- | --- | --- | --- | --- |
| **THIRD YEAR (SIXTH SEMESTER)** | | | | | |
| S. No | Course Code | Subject | Credit Hours | | |
| Th | Lab | Total |
| 1 | EEE-3207 | Health, Safety & Environment | 3 | 0 | 3 |
| 2 | EEE-3208 | Instrumentation & Control | 2 | 1 | 3 |
| 3 | EEE-3601 | Climate change and disaster management | 3 | 0 | 3 |
| 4 | EEE-3304 | Wastewater Engineering | 3 | 1 | 4 |
| 5 | EEE-3305 | Solid Waste Management | 3 | 1 | 4 |
| **Total** | | | **14** | **3** | **17** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **FINAL YEAR (SEVENTH SEMESTER)** | | | | | |
| S. No | Course Code | Subject | Credit Hours | | |
| Th | Lab | Total |
| 1 | EEE-4306 | Air and noise pollution control | 3 | 1 | 4 |
| 2 | EEE-4602 | Entrepreneurship | 2 | 0 | 2 |
| 3 | EEE-4603 | Project Planning and management | 2 | 0 | 2 |
| 4 | EEE-4307 | Solar Energy Engineering | 3 | 1 | 4 |
| 5 | EEE-499 | Project/Thesis | 0 | 3 | 3 |
| **Total** | | | **10** | **5** | **15** |

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| **FINAL YEAR (EIGHT SEMESTER)** | | | | | |
| S. No | Course Code | Subject | Credit Hours | | |
| Th | Lab | Total |
| 1 | EEE-4604 | Environmental Impact Assessment | 3 | 0 | 3 |
| 2 | EEE-4308 | Wind Energy Engineering | 3 | 1 | 4 |
| 3 | EEE-4209 | Cleaner production technologies | 3 | 0 | 3 |
| 4 | EEE-4605 | Energy Policy & Management | 2 | 0 | 2 |
| 5 | EEE-499 | Project/Thesis | 0 | 3 | 3 |
| **Total** | | | **11** | **4** | **15** |

**\*The total Number of Credit Hours are 134**