**COURSE CATALOGUE**

***First Semester***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. #. | Course  Codes | Name of Subjects | Credit  Hours | | Marks | | |
| **Th.** | **Pr.** | **Theory** | **Practical** | Total |
| 1 | (SS III) | Islamic Studies / Ethics | 02 + 00 | | 50 | 00 | 50 |
| 2 | (PS 106) | Pakistan Studies | 02 + 00 | | 50 | 00 | 50 |
| 3 | (MTH 102) | Applied Calculus | 03 + 00 | | 100 | 00 | 100 |
| 4 | (ME 101) | Engineering Drawing & Graphics | 02 + 02 | | 50 | 100 | 150 |
| 5 | (ME 111) | Engineering Statics | 03 + 01 | | 100 | 50 | 150 |
| 6 | (ME 121) | Engineering Materials | 03 + 00 | | 100 | 00 | 100 |
| Total | | | 18 | | 450 | 150 | 600 |

***Second Semester***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. #. | Course  Codes | Name of Subjects | Credit  Hours | | Marks | | |
| **Th.** | **Pr.** | **Theory** | **Practical** | Total |
| 1 | (EN 101) | Functional English | 03 + 00 | | 100 | 00 | 100 |
| 2 | (MTH 113) | Linear Algebra, Differential Equations and Analytical Geometry | 03 + 00 | | 100 | 00 | 100 |
| 3 | (ME 131) | Engineering Dynamics | 03 + 00 | | 100 | 00 | 100 |
| 4 | (El 102) | Electrical Technology | 03 + 01 | | 100 | 50 | 150 |
| 5 | (ME 141) | Workshop Practice | 00 + 02 | | 00 | 100 | 100 |
| Total | | | 15 | | 400 | 150 | 550 |

***Third* *Semester***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. #. | Course  Codes | Name of Subjects | Credit  Hours | | Marks | | |
| **Th.** | **Pr.** | **Theory** | **Practical** | Total |
| 1 | (MTH 213) | Complex Variables & Transforms | 03 + 00 | | 100 | 00 | 100 |
| 2 | (ME 201) | Strength of Materials-I | 03 + 01 | | 100 | 50 | 150 |
| 3 | (ME 211) | Mechanics of Machines-I | 02 + 00 | | 50 | 00 | 50 |
| 4 | (ME 221) | Thermodynamics-I | 03 + 01 | | 100 | 50 | 150 |
| 5 | (ES 281) | Basic Electronics | 03 + 01 | | 100 | 50 | 150 |
| Total | | | 17 | | 450 | 150 | 600 |

***Fourth* *Semester***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. #. | Course  Codes | Name of Subjects | Credit  Hours | | Marks | | |
| **Th.** | **Pr.** | **Theory** | **Practical** | Total |
| 1 | (CS-225) | Introduction to Computers & C++ Programming | 03 + 01 | | 100 | 50 | 150 |
| 2 | (ME 231) | Strength of Materials-II | 03 + 00 | | 100 | 00 | 100 |
| 3 | (ME 241) | Thermodynamics-II | 03 + 01 | | 100 | 50 | 150 |
| 4 | (ME 251) | Fluid Mechanics-I | 03 + 01 | | 100 | 50 | 150 |
| 5 | (ME 261) | Mechanics of Machines-II | 02 + 01 | | 50 | 50 | 100 |
| Total | | | 18 | | 450 | 200 | 650 |

***Fifth* *Semester***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. #. | Course  Codes | Name of Subjects | Credit  Hours | | Marks | | |
| **Th.** | **Pr.** | **Theory** | **Practical** | Total |
| 1 | (MTH 311) | Numerical Analysis & Computer Applications | 03 + 01 | | 100 | 50 | 150 |
| 2 | (ME 301) | Heat & Mass Transfer | 03 + 01 | | 100 | 50 | 150 |
| 3 | (ME 311) | Applied Aerodynamics | 02 + 01 | | 50 | 50 | 100 |
| 4 | (ME 321) | Fluid Mechanics-II | 03 + 01 | | 100 | 50 | 150 |
| 5 | (ME 331) | Machine Design & CAD-I | 03 + 00 | | 100 | 00 | 100 |
| Total | | | 18 | | 450 | 200 | 650 |

***Sixth* *Semester***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. #. | Course  Codes | Name of Subjects | Credit  Hours | | Marks | | |
| **Th.** | **Pr.** | **Theory** | **Practical** | Total |
| 1 | (ME 341) | Instrumentation & Control | 02 + 01 | | 50 | 50 | 100 |
| 2 | (MTH 317) | Statistics & Probability | 03 + 00 | | 100 | 00 | 100 |
| 3 | (ME 351) | Machine Design & CAD-II | 03 + 01 | | 100 | 50 | 150 |
| 4 | (ME 371) | Heating, Ventilation and Air Conditioning | 03 + 01 | | 100 | 50 | 150 |
| 5 | (ME 381) | Mechanical Vibrations | 03 + 01 | | 100 | 50 | 150 |
| Total | | | 18 | | 450 | 200 | 650 |

***Seventh* *Semester***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. #. | Course  Codes | Name of Subjects | Credit  Hours | | Marks | | |
| **Th.** | **Pr.** | **Theory** | **Practical** | Total |
| 1 | (ME 401) | Industrial Economics & Management | 02 + 00 | | 50 | 00 | 50 |
| 2 | (ME 411) | Automobile Engineering | 02 + 01 | | 50 | 50 | 100 |
| 3 | (ME 421) | Mechatronics | 03 + 01 | | 100 | 50 | 150 |
| 4 | (ME 431) | Manufacturing Processes-I | 02 + 01 | | 50 | 50 | 100 |
| 5 | (EE 425) | Safety, Health & Environment | 02 + 00 | | 50 | 00 | 50 |
| 6 | (ME 441) | Thermal Power Plants | 03 + 01 | | 100 | 50 | 150 |
| Total | | | 18 | | 400 | 200 | 600 |

***Eighth* *Semester***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| S. #. | Course  Codes | Name of Subjects | Credit  Hours | | Marks | | |
| **Th.** | **Pr.** | **Theory** | **Practical** | Total |
| 1 | (ME 451) | Renewable and Emerging Energy Technologies (REET) | 03 + 01 | | 100 | 50 | 150 |
| 2 | (ME 461) | Manufacturing Processes -II | 03 + 01 | | 100 | 50 | 150 |
| 3 | (ME 471) | Maintenance Engineering | 02 + 00 | | 50 | 00 | 50 |
| 4 | (ME 481) | Project Management | 02 + 00 | | 50 | 00 | 50 |
| 5 | (ME 499) | Project/Thesis | -- + -- | | 00 | 200 | 200 |
| Total | | | 12 | | 300 | 300 | 600 |