

| <b>Semester-1</b>   |  |             |
|---------------------|--|-------------|
| Course Code         | Course Title                           | CH          |
| GSC-110             | Applied Calculus & Analytical Geometry | 3+0         |
| EEN-110             | Linear Circuit Analysis                | 3+1         |
| ESC-111             | Basic Mechanical Engineering           | 2+0         |
| EEL-112             | Workshop Practice                      | 0+1         |
| HSS-111             | Functional English                     | 2+0         |
| HSS-114/<br>HSS-116 | Islamic Studies/ Ethics                | 2+0         |
| <b>Total</b>        |  | <b>12+2</b> |

| <b>Semester-3</b> |                             |             |
|-------------------|-----------------------------|-------------|
| Course Code       | Course Title                | CH          |
| GSC-210           | Differential Equations      | 3+0         |
| EEN-210           | Basic Electronics           | 3+1         |
| EEN-212           | Electrical Network Analysis | 3+1         |
| CEN-120           | Digital Logic Design        | 3+1         |
| CSC-210           | Object Oriented Programming | 3+1         |
| <b>Total</b>      |                             | <b>15+4</b> |

| <b>Semester-5</b> |                                   |             |
|-------------------|-----------------------------------|-------------|
| Course Code       | Course Title                      | CH          |
| GSC-310           | Prob. & Statistics for Engineers  | 3+0         |
| EEN-311           | Electromagnetic Field Theory      | 3+0         |
| EEN-313           | Signals & Systems                 | 3+1         |
| EEN-314           | Introduction to Power Engineering | 3+0         |
| EEN-316           | Instrumentation & Measurements    | 3+1         |
| <b>Total</b>      |                                   | <b>15+2</b> |

| <b>Semester-7</b>  |  |             |
|--------------------|--|-------------|
| Course Code        | Course Title   | CH          |
| ESC-499            | Project-I  | 0+3         |
| HSS-4xx            | Management Sciences Elective   | 3+0         |
| EEN-412<br>EET-411 | Linear Control Systems (Electronics only)<br>Digital Comm (Telecom only) | 3+1         |
|                    | Elective-I   | 3+1         |
|                    | Elective-II  | 3+1         |
| <b>Total</b>       |  | <b>12+6</b> |

| <b>Semester-2</b> |                           |             |
|-------------------|---------------------------|-------------|
| Course Code       | Course Title              | CH          |
| GSC-121           | Linear Algebra            | 3+0         |
| GSC-113           | Applied Physics           | 3+1         |
| EEL-121           | Engineering Drawing & CAD | 0+1         |
| CSC-110           | Computing Fundamentals    | 2+1         |
| HSS-120           | Communication Skills      | 3+0         |
| HSS-123           | Pakistan Studies          | 2+0         |
| <b>Total</b>      |                           | <b>13+3</b> |

| <b>Semester-4</b> |                                      |             |
|-------------------|--------------------------------------|-------------|
| Course Code       | Course Title                         | CH          |
| GSC-220           | Complex Variables & Transforms       | 3+0         |
| EEN-224           | Electronic Devices & Circuits        | 3+1         |
| CEN-222           | Data Comm. & Networking              | 3+1         |
| CEN-211           | Computer Architecture & Organization | 3+0         |
| EEN-221           | Electro-Mechanical Systems           | 3+1         |
| <b>Total</b>      |                                      | <b>15+3</b> |

| <b>Semester-6</b> |   |             |
|-------------------|---|-------------|
| Course Code       | Course Title                            | CH          |
| GSC-320           | Numerical Analysis                      | 3+0         |
| CEN-321           | Microprocessors & Interfacing           | 3+1         |
| EET-321           | Communication Systems                   | 3+1         |
| EEN-325           | Digital Signal Processing               | 3+1         |
| HSS-320           | Technical Writing & Presentation Skills | 3+0         |
| <b>Total</b>      |   | <b>15+3</b> |

| <b>Semester-8</b> |                          |             |
|-------------------|--------------------------|-------------|
| Course Code       | Course Title             | CH          |
| ESC-499           | Project-II               | 0+3         |
| HSS-422           | Engineering Ethics       | 3+0         |
| HSS-4xx           | Social Sciences Elective | 3+0         |
|                   | Elective-III             | 3+1         |
|                   | Elective-IV              | 3+1         |
| <b>Total</b>      |                          | <b>12+5</b> |

**Total Credit Hours= 137 Credit Hours**

## **Elective Courses for Specialization**

### **Electronic Engineering**

| <b>S.No</b> | <b>Course Title</b>                       | <b>Course Code</b> |
|-------------|---|--------------------|
| 1           | Embedded System Design                    | ECN-420            |
| 2           | FPGA Based System Design                  | ECN-421            |
| 3           | VLSI Design                               | ECN-422            |
| 4           | Industrial Process Control                | ECN-423            |
| 5           | Digital Electronics                       | ECN-424            |
| 6           | Digital Instrumentation                   | ECN-425            |
| 7           | Opto-Electronics                          | ECN-426            |
| 8           | Industrial Electronics                    | ECN-427            |
| 9           | Power Electronics                         | ECN-428            |
| 10          | Digital System Design                     | ECN-429            |
| 11          | Linear Integrated Circuits & Applications | ECN-430            |
| 12          | Industrial Automation                     | ECN-431            |
| 13          | Fault Tolerant Systems                    | ECN-432            |
| 14          | Mechatronics                              | ECN-433            |
| 15          | Modern Communication Systems              |                    |
| 16          | Digital Image Processing                  | CCN-423            |