

## 3.1.4 Construction Engineering

### FIRST YEAR

| Spring Semester |                                      |              |    | Fall Semester |             |   |              |    |       |
|-----------------|--------------------------------------|--------------|----|---------------|-------------|---|--------------|----|-------|
| Course Code     | Course Title                         | Credit Hours |    |               | Course Code | Course Title                            | Credit Hours |    |       |
|                 |                                      | Th           | Pr | Total         |             |   | Th           | Pr | Total |
| CN-108          | Basic Engineering Drawing            | 3            | 1  | 4             | CN-107      | Surveying with Construction Application | 3            | 1  | 4     |
| CN-102          | Statics and Dynamics                 | 3            | 1  | 4             | CN-104      | Engineering Materials                   | 3            | 1  | 4     |
| EE-116          | Principles of Electrical Engineering | 3            | 1  | 4             | CN-216      | Computing Fundamentals for Engineers    | 2            | 1  | 3     |
| CY-110          | Applied Chemistry for Engineers      | 2            | 1  | 3             | MT-114      | Calculus                                | 3            | 0  | 3     |
| HS-106          | Pakistan Studies OR                  | 1            | 0  | 1             | HS-111      | Functional English                      | 2            | 0  | 2     |
| HS-127          | Pakistan Studies (for Foreigners)    |              |    |               | HS-205      | Islamic Studies OR                      | 2            | 0  | 2     |
|                 |                                      |              |    |               | HS-209      | Ethical Behavior (for Non-Muslims)      |              |    |       |

### SECOND YEAR

| Spring Semester |   |              |    | Fall Semester |             |  |              |    |       |
|-----------------|---|--------------|----|---------------|-------------|--|--------------|----|-------|
| Course Code     | Course Title                                    | Credit Hours |    |               | Course Code | Course Title                                       | Credit Hours |    |       |
|                 |   | Th           | Pr | Total         |             |  | Th           | Pr | Total |
| CN-217          | Building Construction Technology                | 3            | 0  | 3             | CN-224      | Fluid Mechanics                                    | 3            | 1  | 4     |
| CN-224          | Construction Engineers Drawing                  | 3            | 1  | 4             | CN-225      | Geotechnical Engineering-I                         | 2            | 1  | 3     |
| CN-219          | Structures-I                                    | 3            | 0  | 3             | CN-222      | Construction Estimating                            | 3            | 0  | 3     |
| CN-223          | Fundamentals of Applied Economics for Engineers | 3            | 0  | 3             | MT-331      | Applied Probability & Statistics                   | 3            | 0  | 3     |
| HS-218          | Business Communication                          | 2            | 1  | 3             | MT-221      | Linear Algebra and Ordinary Differential Equations | 3            | 0  | 3     |
|                 |   |              |    |               | HS-219      | Professional Ethics                                | 2            | 0  | 2     |

### THIRD YEAR

| Spring Semester |   |              |    | Fall Semester |             |   |              |    |       |
|-----------------|---|--------------|----|---------------|-------------|---|--------------|----|-------|
| Course Code     | Course Title                                    | Credit Hours |    |               | Course Code | Course Title                                  | Credit Hours |    |       |
|                 |   | Th           | Pr | Total         |             |   | Th           | Pr | Total |
| CN-320          | Fundamentals of Construction Project Management | 3            | 0  | 3             | CN-326      | Construction Planning, Scheduling and Control | 3            | 1  | 4     |
| CN-334          | Structures-II                                   | 3            | 0  | 3             | CN-327      | Transportation Engineering                    | 2            | 1  | 3     |
| CN-323          | Construction Contracts                          | 3            | 0  | 3             | CN-328      | Geotechnical Engineering-II                   | 2            | 1  | 3     |
| CN-324          | Accounting and Financial Management             | 3            | 0  | 3             | CN-331      | Construction Jobsite Engineering Management   | 3            | 0  | 3     |
| CN-332          | Geo-Informatics                                 | 3            | 1  | 4             | AR-310      | Architectural Studies for Engineers           | 3            | 0  | 3     |
|                 |   |              |    |               | CN-333      | Construction Economic Analysis                | 3            | 0  | 3     |

### FINAL YEAR

| Spring Semester |   |  |     | Fall Semester |                     |   |              |    |       |
|-----------------|---|--|-----|---------------|---------------------|---|--------------|----|-------|
| Course Code     | Course Title  | Credit Hours   |     |               | Course Code         | Course Title                                | Credit Hours |    |       |
|                 |   | Th   | Pr  | Total         |                     |   | Th           | Pr | Total |
| CN-416          | Legal and Regulatory Environment in the Construction Industry | 3  | 0   | 3             | CN-424              | Heavy Construction Equipment and Operations | 3            | 0  | 3     |
| CN-417          | Temporary Structure in Construction                           | 3  | 0   | 3             | CN-428              | Sustainable Construction                    | 3            | 1  | 4     |
| CN-418          | Systems in Building Construction                              | 3  | 0   | 3             | CN-429              | Building Information Modeling               | 2            | 1  | 3     |
| CN-427          | Quality and Saety Aspects in Construction Engineering         | 2  | 0   | 2             | CN-###              | Elective Stream 2*                          | 3            | 0  | 3     |
| CN-###          | Elective Stream 1*  | 3/2  | 0/1 | 3             | CN-426              | Construction Engineering Project            | 0            | 6  | 6     |
| CN-426          | Construction Engineering Project*                             | 0  | 0   | 0             |                     |   |              |    |       |
|                 | <b>Elective Stream</b>  |  |     |               |                     |   |              |    |       |
|                 | CN-430  | Disaster and Reconstruction Management                     |     |               | (Elective Stream 1) |   |              |    |       |
|                 | CN-431  | Hydraulic Engineering and Water Resources Management       |     |               | (Elective Stream 1) |   |              |    |       |
|                 | CN-432  | Leadership and Human Skills in Management                  |     |               | (Elective Stream 2) |   |              |    |       |
|                 | CN-423  | Management and Marketing of Construction Services          |     |               | (Elective Stream 2) |   |              |    |       |
|                 | CN-433  | Introduction to Entrepreneurship and Opportunit Assessment |     |               | (Elective Stream 2) |   |              |    |       |

\* Duration one academic year: Requires literature survey and preliminary work during this Semester