

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**B.Tech. in CIVIL ENGINEERING**  
**COURSE STRUCTURE & SYLLABUS (R18)**

Applicable From 2018-19 Admitted Batch

**I YEAR I SEMESTER**

| S. No. | Course Code | Course Title                        | L         | T        | P         | Credits   |
|--------|-------------|-------------------------------------|-----------|----------|-----------|-----------|
| 1      | MA101BS     | Mathematics - I                     | 3         | 1        | 0         | 4         |
| 2      | PH102BS     | Engineering Physics                 | 3         | 1        | 0         | 4         |
| 3      | CS103ES     | Programming for Problem Solving     | 3         | 1        | 0         | 4         |
| 4      | ME104ES     | Engineering Graphics                | 1         | 0        | 4         | 3         |
| 5      | PH105BS     | Engineering Physics Lab             | 0         | 0        | 3         | 1.5       |
| 6      | CS106ES     | Programming for Problem Solving Lab | 0         | 0        | 3         | 1.5       |
| 7      | *MC109ES    | Environmental Science               | 3         | 0        | 0         | 0         |
|        |             | Induction Programme                 |           |          |           |           |
|        |             | <b>Total Credits</b>                | <b>13</b> | <b>3</b> | <b>10</b> | <b>18</b> |

**I YEAR II SEMESTER**

| S. No. | Course Code | Course Title                                  | L         | T        | P        | Credits     |
|--------|-------------|---|-----------|----------|----------|-------------|
| 1      | MA201BS     | Mathematics - II                              | 3         | 1        | 0        | 4           |
| 2      | CH202BS     | Chemistry                                     | 3         | 1        | 0        | 4           |
| 3      | ME203ES     | Engineering Mechanics                         | 3         | 1        | 0        | 4           |
| 4      | ME205ES     | Engineering Workshop                          | 1         | 0        | 3        | 2.5         |
| 5      | EN205HS     | English                                       | 2         | 0        | 0        | 2           |
| 6      | CH206BS     | Engineering Chemistry Lab                     | 0         | 0        | 3        | 1.5         |
| 7      | EN207HS     | English Language and Communication Skills Lab | 0         | 0        | 2        | 1           |
|        |             | <b>Total Credits</b>                          | <b>12</b> | <b>3</b> | <b>8</b> | <b>19.0</b> |

**II YEAR I SEMESTER**

| S. No. | Course Code | Course Title               | L         | T        | P        | Credits   |
|--------|-------------|----------------------------|-----------|----------|----------|-----------|
| 1      | CE301PC     | Surveying and Geomatics    | 3         | 0        | 0        | 3         |
| 2      | CE302PC     | Engineering Geology        | 2         | 0        | 0        | 2         |
| 3      | CE303PC     | Strength of Materials - I  | 3         | 1        | 0        | 4         |
| 4      | MA304BS     | Probability and Statistics | 3         | 1        | 0        | 4         |
| 5      | CE305PC     | Fluid Mechanics            | 3         | 1        | 0        | 4         |
| 6      | CE306PC     | Surveying Lab              | 0         | 0        | 3        | 1.5       |
| 7      | CE307PC     | Strength of Materials Lab  | 0         | 0        | 3        | 1.5       |
| 8      | CE308PC     | Engineering Geology Lab    | 0         | 0        | 2        | 1         |
| 9      | *MC309      | Constitution of India      | 3         | 0        | 0        | 0         |
|        |             | <b>Total Credits</b>       | <b>17</b> | <b>3</b> | <b>8</b> | <b>21</b> |

**II YEAR II SEMESTER**

| S. No. | Course Code | Course Title                                 | L | T | P | Credits |
|--------|-------------|--|---|---|---|---------|
| 1      | EE401ES     | Basic Electrical and Electronics Engineering | 3 | 0 | 0 | 3       |

|    |         |  |           |          |           |           |
|----|---------|--|-----------|----------|-----------|-----------|
| 2  | CE402ES | Basic Mechanical Engineering for Civil Engineers | 2         | 0        | 0         | 2         |
| 3  | CE403PC | Building Materials, Construction and Planning    | 3         | 0        | 0         | 3         |
| 4  | CE404PC | Strength of Materials - II                       | 3         | 0        | 0         | 3         |
| 5  | CE405PC | Hydraulics and Hydraulic Machinery               | 3         | 0        | 0         | 3         |
| 6  | CE406PC | Structural Analysis - I                          | 3         | 0        | 0         | 3         |
| 7  | CE407PC | Computer aided Civil Engineering Drawing         | 0         | 0        | 3         | 1.5       |
| 8  | CE409PC | Hydraulics and Hydraulic Machinery Lab           | 0         | 0        | 3         | 1.5       |
| 9  | EE409ES | Basic Electrical and Electronics Engineering Lab | 0         | 0        | 2         | 1         |
| 10 | *MC409  | Gender Sensitization Lab                         | 0         | 0        | 2         | 0         |
|    |         | <b>Total Credits</b>                             | <b>17</b> | <b>0</b> | <b>10</b> | <b>21</b> |

**III YEAR I SEMESTER**

| S. No. | Course Code | Course Title                                    | L         | T        | P        | Credits   |
|--------|-------------|---|-----------|----------|----------|-----------|
| 4      | CE501       | Structural Analysis-II                          | 3         | 0        | 0        | 3         |
| 2      | CE502PC     | Geotechnical Engineering                        | 3         | 0        | 0        | 3         |
| 3      | CE503PC     | Structural Engineering -I (RCC)                 | 3         | 1        | 0        | 4         |
| 4      | CE504PC     | Transportation Engineering                      | 3         | 0        | 0        | 3         |
| 5      |             | Professional Elective-I                         | 3         | 0        | 0        | 3         |
| 6      | SM505MS     | Engineering Economics and Accountancy           | 2         | 0        | 0        | 2         |
| 7      | CE506PC     | Highway Engineering and Concrete Technology Lab | 0         | 0        | 3        | 1.5       |
| 8      | CE507PC     | Geotechnical Engineering Lab                    | 0         | 0        | 3        | 1.5       |
| 9      | EN508HS     | Advanced Communication Skills Lab               | 0         | 0        | 2        | 1         |
| 10     | *MC509      | Intellectual Property Rights                    | 3         | 0        | 0        | 0         |
|        |             | <b>Total Credits</b>                            | <b>20</b> | <b>1</b> | <b>8</b> | <b>22</b> |

**III YEAR II SEMESTER**

| S. No | Course Code | Course Title                            | L         | T        | P        | Credits   |
|-------|-------------|---|-----------|----------|----------|-----------|
| 1     | CE601PC     | Hydrology & Water Resources Engineering | 3         | 1        | 0        | 4         |
| 1     | CE602PC     | Environmental Engineering               | 3         | 0        | 0        | 3         |
| 2     | CE603PC     | Foundation Engineering                  | 3         | 0        | 0        | 3         |
| 3     | CE604PC     | Structural Engineering -II (Steel)      | 3         | 1        | 0        | 4         |
| 5     |             | Professional Elective -II               | 3         | 0        | 0        | 3         |
| 6     |             | Open Elective -I                        | 3         | 0        | 0        | 3         |
| 7     | CE605PC     | Environmental Engineering Lab           | 0         | 0        | 2        | 1         |
| 8     | CE606PC     | Computer Aided Design Lab               | 0         | 0        | 2        | 1         |
| 9     | *MC609      | Environmental Science                   | 3         | 0        | 0        | 0         |
|       |             | <b>Total Credits</b>                    | <b>21</b> | <b>2</b> | <b>4</b> | <b>22</b> |

\*MC609 - Environmental Science – Should be Registered by Lateral Entry Students Only.

**IV YEAR I SEMESTER**

| S. No. | Course Code | Course Title                               | L | T | P | Credits |
|--------|-------------|--|---|---|---|---------|
| 1      | CE701PC     | Estimation, Costing and Project Management | 3 | 1 | 0 | 4       |
| 2      |             | Professional Elective -III                 | 3 | 0 | 0 | 3       |
| 3      |             | Professional Elective -IV                  | 3 | 0 | 0 | 3       |

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**B.Tech. in ELECTRICAL AND ELECTRONICS ENGINEERING**  
**COURSE STRUCTURE & SYLLABUS (R18)**

Applicable From 2018-19 Admitted Batch

**I YEAR I SEMESTER**

| S. No. | Course Code | Course Title                                  | L         | T        | P         | Credits   |
|--------|-------------|---|-----------|----------|-----------|-----------|
| 1      | MA101BS     | Mathematics - I                               | 3         | 1        | 0         | 4         |
| 2      | CH102BS     | Chemistry                                     | 3         | 1        | 0         | 4         |
| 3      | EE103ES     | Basic Electrical Engineering                  | 3         | 0        | 0         | 3         |
| 4      | ME105ES     | Engineering Workshop                          | 1         | 0        | 3         | 2.5       |
| 5      | EN105HS     | English                                       | 2         | 0        | 0         | 2         |
| 6      | CH106BS     | Engineering Chemistry Lab                     | 0         | 0        | 3         | 1.5       |
| 7      | EN107HS     | English Language and Communication Skills Lab | 0         | 0        | 2         | 1         |
| 8      | EE108ES     | Basic Electrical Engineering Lab              | 0         | 0        | 2         | 1         |
|        |             | Induction Programme                           |           |          |           |           |
|        |             | <b>Total Credits</b>                          | <b>12</b> | <b>2</b> | <b>10</b> | <b>19</b> |

**I YEAR II SEMESTER**

| S. No. | Course Code | Course Title                        | L         | T        | P         | Credits   |
|--------|-------------|-------------------------------------|-----------|----------|-----------|-----------|
| 1      | MA201BS     | Mathematics - II                    | 3         | 1        | 0         | 4         |
| 2      | AP202BS     | Applied Physics                     | 3         | 1        | 0         | 4         |
| 3      | CS203ES     | Programming for Problem Solving     | 3         | 1        | 0         | 4         |
| 4      | ME204ES     | Engineering Graphics                | 1         | 0        | 4         | 3         |
| 5      | AP205BS     | Applied Physics Lab                 | 0         | 0        | 3         | 1.5       |
| 6      | CS206ES     | Programming for Problem Solving Lab | 0         | 0        | 3         | 1.5       |
| 7      | *MC209ES    | Environmental Science               | 3         | 0        | 0         | 0         |
|        |             | <b>Total Credits</b>                | <b>13</b> | <b>3</b> | <b>10</b> | <b>18</b> |

**II YEAR I SEMESTER**

| S. No. | Course Code | Course Title                | L         | T        | P        | Credits   |
|--------|-------------|-----------------------------|-----------|----------|----------|-----------|
| 1      | EE301ES     | Engineering Mechanics       | 3         | 1        | 0        | 4         |
| 2      | EE302PC     | Electrical Circuit Analysis | 3         | 1        | 0        | 4         |
| 3      | EE303PC     | Analog Electronics          | 3         | 0        | 0        | 3         |
| 4      | EE304PC     | Electrical Machines - I     | 3         | 1        | 0        | 4         |
| 5      | EE305PC     | Electromagnetic Fields      | 3         | 0        | 0        | 3         |
| 6      | EE306PC     | Electrical Machines Lab - I | 0         | 0        | 2        | 1         |
| 7      | EE307PC     | Analog Electronics Lab      | 0         | 0        | 2        | 1         |
| 8      | EE308PC     | Electrical Circuits Lab     | 0         | 0        | 2        | 1         |
| 9      | *MC309      | Gender Sensitization Lab    | 0         | 0        | 2        | 0         |
|        |             | <b>Total Credits</b>        | <b>15</b> | <b>3</b> | <b>8</b> | <b>21</b> |

**II YEAR II SEMESTER**

| S. No. | Course Code | Course Title  | L | T | P | Credits |
|--------|-------------|---|---|---|---|---------|
| 1      | MA401BS     | Laplace Transforms, Numerical Methods & Complex variables | 3 | 1 | 0 | 4       |

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**  
**B.Tech. in MECHANICAL ENGINEERING**  
**COURSE STRUCTURE & SYLLABUS (R18)**

Applicable From 2018-19 Admitted Batch

**I YEAR I SEMESTER**

| S. No. | Course Code | Course Title                        | L         | T        | P         | Credits   |
|--------|-------------|-------------------------------------|-----------|----------|-----------|-----------|
| 1      | MA101BS     | Mathematics - I                     | 3         | 1        | 0         | 4         |
| 2      | PH102BS     | Engineering Physics                 | 3         | 1        | 0         | 4         |
| 3      | CS103ES     | Programming for Problem Solving     | 3         | 1        | 0         | 4         |
| 4      | ME104ES     | Engineering Graphics                | 1         | 0        | 4         | 3         |
| 5      | PH105BS     | Engineering Physics Lab             | 0         | 0        | 3         | 1.5       |
| 6      | CS106ES     | Programming for Problem Solving Lab | 0         | 0        | 3         | 1.5       |
| 7      | *MC109ES    | Environmental Science               | 3         | 0        | 0         | 0         |
|        |             | Induction Programme                 |           |          |           |           |
|        |             | <b>Total Credits</b>                | <b>13</b> | <b>3</b> | <b>10</b> | <b>18</b> |

**I YEAR II SEMESTER**

| S. No. | Course Code | Course Title                                  | L         | T        | P        | Credits     |
|--------|-------------|---|-----------|----------|----------|-------------|
| 1      | MA201BS     | Mathematics - II                              | 3         | 1        | 0        | 4           |
| 2      | CH202BS     | Chemistry                                     | 3         | 1        | 0        | 4           |
| 3      | ME203ES     | Engineering Mechanics                         | 3         | 1        | 0        | 4           |
| 4      | ME205ES     | Engineering Workshop                          | 1         | 0        | 3        | 2.5         |
| 5      | EN205HS     | English                                       | 2         | 0        | 0        | 2           |
| 6      | CH206BS     | Engineering Chemistry Lab                     | 0         | 0        | 3        | 1.5         |
| 7      | EN207HS     | English Language and Communication Skills Lab | 0         | 0        | 2        | 1           |
|        |             | <b>Total Credits</b>                          | <b>12</b> | <b>3</b> | <b>8</b> | <b>19.0</b> |

**II YEAR I SEMESTER**

| S. No. | Course Code | Course Title                                   | L         | T        | P        | Credits   |
|--------|-------------|--|-----------|----------|----------|-----------|
| 1      | MA301BS     | Probability and Statistics & Complex Variables | 3         | 1        | 0        | 4         |
| 2      | ME302PC     | Mechanics of Solids                            | 3         | 1        | 0        | 4         |
| 3      | ME303PC     | Material Science and Metallurgy                | 3         | 0        | 0        | 3         |
| 4      | ME304PC     | Production Technology                          | 3         | 0        | 0        | 3         |
| 5      | ME305PC     | Thermodynamics                                 | 3         | 1        | 0        | 4         |
| 6      | ME306PC     | Production Technology Lab                      | 0         | 0        | 2        | 1         |
| 7      | ME307PC     | Machine Drawing Practice                       | 0         | 0        | 2        | 1         |
| 8      | ME308PC     | Material Science and Mechanics of Solids Lab   | 0         | 0        | 2        | 1         |
| 9      | *MC309      | Constitution of India                          | 3         | 0        | 0        | 0         |
|        |             | <b>Total Credits</b>                           | <b>18</b> | <b>3</b> | <b>6</b> | <b>21</b> |

**II YEAR II SEMESTER**

| S. No. | Course Code | Course Title                                 | L | T | P | Credits |
|--------|-------------|--|---|---|---|---------|
| 1      | EE401ES     | Basic Electrical and Electronics Engineering | 3 | 0 | 0 | 3       |

|    |         |  |           |          |          |           |
|----|---------|--|-----------|----------|----------|-----------|
| 2  | ME402PC | Kinematics of Machinery                          | 3         | 1        | 0        | 4         |
| 3  | ME403PC | Thermal Engineering - I                          | 3         | 1        | 0        | 4         |
| 4  | ME404PC | Fluid Mechanics and Hydraulic Machines           | 3         | 1        | 0        | 4         |
| 5  | ME405PC | Instrumentation and Control Systems              | 3         | 0        | 0        | 3         |
| 6  | EE409ES | Basic Electrical and Electronics Engineering Lab | 0         | 0        | 2        | 1         |
| 7  | ME407PC | Fluid Mechanics and Hydraulic Machines Lab       | 0         | 0        | 2        | 1         |
| 8  | ME408PC | Instrumentation and Control Systems Lab          | 0         | 0        | 2        | 1         |
| 10 | *MC409  | Gender Sensitization Lab                         | 0         | 0        | 2        | 0         |
|    |         | <b>Total Credits</b>                             | <b>15</b> | <b>3</b> | <b>8</b> | <b>21</b> |

**III YEAR I SEMESTER**

| S. No. | Course Code | Course Title                            | L         | T        | P        | Credits   |
|--------|-------------|---|-----------|----------|----------|-----------|
| 1      | ME501PC     | Dynamics of Machinery                   | 3         | 1        | 0        | 4         |
| 2      | ME502PC     | Design of Machine Members-I             | 3         | 0        | 0        | 3         |
| 3      | ME503PC     | Metrology & Machine Tools               | 3         | 0        | 0        | 3         |
| 4      | SM504MS     | Business Economics & Financial Analysis | 3         | 0        | 0        | 3         |
| 5      | ME505PC     | Thermal Engineering-II                  | 3         | 0        | 0        | 3         |
| 6      | ME506PC     | Operations Research                     | 3         | 0        | 0        | 3         |
| 7      | ME507PC     | Thermal Engineering Lab                 | 0         | 0        | 2        | 1         |
| 8      | ME508PC     | Metrology & Machine Tools Lab           | 0         | 0        | 2        | 1         |
| 9      | ME509PC     | Kinematics & Dynamics Lab               | 0         | 0        | 2        | 1         |
| 10     | *MC510      | Intellectual Property Rights            | 3         | 0        | 0        | 0         |
|        |             | <b>Total Credits</b>                    | <b>21</b> | <b>1</b> | <b>6</b> | <b>22</b> |

**III YEAR II SEMESTER**

| S. No | Course Code | Course Title                      | L         | T        | P        | Credits   |
|-------|-------------|-----------------------------------|-----------|----------|----------|-----------|
| 1     | ME601PC     | Design of Machine Members-II      | 3         | 0        | 0        | 3         |
| 2     | ME602PC     | Heat Transfer                     | 3         | 1        | 0        | 4         |
| 3     | ME603PC     | CAD & CAM                         | 3         | 0        | 0        | 3         |
| 4     |             | Professional Elective - I         | 3         | 0        | 0        | 3         |
| 5     |             | Open Elective - I                 | 3         | 0        | 0        | 3         |
| 6     | ME604PC     | Finite Element Methods            | 3         | 0        | 0        | 3         |
| 7     | ME605PC     | Heat Transfer Lab                 | 0         | 0        | 2        | 1         |
| 8     | ME606PC     | CAD & CAM Lab                     | 0         | 0        | 2        | 1         |
| 9     | EN608HS     | Advanced Communication Skills lab | 0         | 0        | 2        | 1         |
| 10    | *MC609      | Environmental Science             | 3         | 0        | 0        | 0         |
|       |             | <b>Total Credits</b>              | <b>21</b> | <b>1</b> | <b>6</b> | <b>22</b> |

**IV YEAR I SEMESTER**

| S. No. | Course Code | Course Title  | L | T | P | Credits |
|--------|-------------|---|---|---|---|---------|
| 1      | ME701PC     | Refrigeration & Air Conditioning                    | 3 | 0 | 0 | 3       |
| 2      |             | Professional Elective - II                          | 3 | 0 | 0 | 3       |
| 3      |             | Professional Elective - III                         | 3 | 0 | 0 | 3       |
| 4      |             | Professional Elective - IV                          | 3 | 0 | 0 | 3       |
| 5      |             | Open Elective - II                                  | 3 | 0 | 0 | 3       |
| 6      | ME702PC     | Industrial Oriented Mini Project/ Summer Internship | 0 | 0 | 0 | 2*      |
| 7      | ME703PC     | Seminar   | 0 | 0 | 2 | 1       |