

**PERI INSTITUTE OF TECHNOLOGY**  
**(AUTONOMUS)**  
**B.E. MECHANICAL ENGINEERING**  
**CURRICULUM AND SYLLABI- REGULATION 2024**  
**SEMESTER I**

| S.No.                 | COURSE CODE | COURSE TITLE                                         | CATEGORY | PERIOD PER WEEK |   |    | TOTAL CONTACT PERIOD | CREDIT |
|-----------------------|-------------|------------------------------------------------------|----------|-----------------|---|----|----------------------|--------|
|                       |             |                                                      |          | L               | T | P  |                      |        |
| THEORY                |             |                                                      |          |                 |   |    |                      |        |
| 1.                    | 24SH108106  | Life Skills - I                                      | EEC      | 1               | 0 | 0  | 1                    | 1      |
| 2.                    | 24SH108108  | Personal and Professional Competencies for Engineers | EEC      | 1               | 0 | 0  | 1                    | 1      |
| 3.                    | 24SH101105  | Engineering Mathematics – I                          | BSC      | 3               | 1 | 0  | 4                    | 4      |
| 4.                    | 24ME101102  | Introduction to Mechanical Engineering               | PCC      | 3               | 0 | 0  | 3                    | 3      |
| 5.                    | 24CS101102  | Fundamentals of programming for problem Solving      | ESC      | 3               | 0 | 0  | 3                    | 3      |
| 6.                    | 24ME105101  | Engineering Graphics and Design                      | ESC      | 2               | 0 | 4  | 6                    | 4      |
| LAB INTEGRATED THEORY |             |                                                      |          |                 |   |    |                      |        |
| 7.                    | 24SH102103  | Materials Physics                                    | BSC      | 3               | 0 | 2  | 5                    | 4      |
| PRACTICALS            |             |                                                      |          |                 |   |    |                      |        |
| 8.                    | 24CS103103  | Basic Programming Lab                                | ESC      | 0               | 0 | 4  | 4                    | 2      |
| 9.                    | 24SH108107  | Communication Lab - I                                | HSMC     | 0               | 0 | 2  | 2                    | 1      |
| TOTAL                 |             |                                                      |          | 16              | 1 | 12 | 29                   | 23     |

**SEMESTER II**

| S.No.                 | COURSE CODE | COURSE TITLE                                 | CATEGORY | PERIOD PER WEEK |   |    | TOTAL CONTACT PERIOD | CREDIT |
|-----------------------|-------------|----------------------------------------------|----------|-----------------|---|----|----------------------|--------|
|                       |             |                                              |          | L               | T | P  |                      |        |
| THEORY                |             |                                              |          |                 |   |    |                      |        |
| 1.                    | 24SH108205  | Life Skills - II                             | EEC      | 1               | 0 | 0  | 1                    | 1      |
| 2.                    | 24SH101206  | Tamils and Technology                        | HSMC     | 1               | 0 | 0  | 1                    | 1      |
| 3.                    | 24EE101202  | Basic Electrical and Electronics Engineering | ESC      | 4               | 0 | 0  | 4                    | 4      |
| 4.                    | 24ME101201  | Engineering Mechanics                        | PCC      | 3               | 0 | 0  | 3                    | 3      |
| LAB INTEGRATED COURSE |             |                                              |          |                 |   |    |                      |        |
| 5.                    | 24SH102204  | Engineering Chemistry                        | BSC      | 3               | 0 | 2  | 5                    | 4      |
| 6.                    | 24SH102202  | Engineering Mathematics – II                 | BSC      | 3               | 0 | 2  | 5                    | 4      |
| PRACTICALS            |             |                                              |          |                 |   |    |                      |        |
| 7.                    | 24ME103202  | Computer-Aided Design Lab                    | PCC      | 0               | 0 | 4  | 4                    | 2      |
| 8.                    | 24ME103203  | IDEA Lab Workshop                            | ESC      | 0               | 0 | 4  | 4                    | 2      |
| 9.                    | 24SH108207  | Communication Lab - II                       | HSMC     | 0               | 0 | 2  | 2                    | 1      |
| MANDATORY COURSE      |             |                                              |          |                 |   |    |                      |        |
| 10.                   | 24SH112203  | Environmental Science and Engineering        | MC       | 2               | 0 | 0  | 2                    | 0      |
| TOTAL                 |             |                                              |          | 17              | 0 | 14 | 31                   | 22     |

### SEMESTER-III

| S.No.                 | COURSE CODE | COURSE TITLE                                  | CATEGORY | PERIOD PER WEEK |   |    | TOTAL CONTACT PERIOD | CREDIT |
|-----------------------|-------------|-----------------------------------------------|----------|-----------------|---|----|----------------------|--------|
|                       |             |                                               |          | L               | T | P  |                      |        |
| THEORY                |             |                                               |          |                 |   |    |                      |        |
| 1.                    |             | Transforms And Partial Differential Equations | BSC      | 3               | 1 | 0  | 4                    | 4      |
| 2.                    |             | Theory of Machines                            | PCC      | 3               | 0 | 1  | 4                    | 3      |
| 3.                    |             | Engineering Thermodynamics                    | PCC      | 3               | 0 | 1  | 3                    | 3      |
| 4.                    |             | Materials Science                             | PCC      | 3               | 0 | 0  | 3                    | 3      |
| 5.                    |             | Open Elective - I                             | OEC      | 2               | 0 | 0  | 2                    | 3      |
| 6.                    |             | Life Skill III – Basic Conversation Skills    | EEC      | 2               | 0 | 0  | 2                    | 1      |
| 7.                    |             | Invention – Principles and Practices          | EEC      | 0               | 0 | 2  | 2                    | 1      |
| LAB INTEGRATED COURSE |             |                                               |          |                 |   |    |                      |        |
| 8.                    |             | Manufacturing Technology-I                    | PPC      | 3               | 0 | 2  | 5                    | 4      |
| PRACTICALS            |             |                                               |          |                 |   |    |                      |        |
| 9.                    |             | CAAD Laboratory                               | PCC      | 0               | 0 | 4  | 4                    | 2      |
| TOTAL                 |             |                                               |          | 19              | 1 | 10 | 29                   | 24     |

### SEMESTER-IV

| S.No.      | COURSE CODE | COURSE TITLE                                           | CATEGORY | PERIOD PER WEEK |   |    | TOTAL CONTACT PERIOD | CREDIT |
|------------|-------------|--------------------------------------------------------|----------|-----------------|---|----|----------------------|--------|
|            |             |                                                        |          | L               | T | P  |                      |        |
| THEORY     |             |                                                        |          |                 |   |    |                      |        |
| 1.         |             | Fluid Mechanics & Machinery                            | ESC      | 4               | 0 | 0  | 4                    | 4      |
| 2.         |             | Strength of Materials for Mechanical Engineering       | PCC      | 3               | 0 | 1  | 4                    | 3      |
| 3.         |             | Thermal Engineering                                    | PCC      | 3               | 0 | 0  | 3                    | 3      |
| 4.         |             | Manufacturing Technology-II                            | BSC      | 3               | 0 | 1  | 4                    | 3      |
| 5.         |             | Professional Elective I                                | PEC      | 3               | 0 | 0  | 2                    | 3      |
| 6.         |             | Open Elective - II                                     | OEC      | 3               | 0 | 0  | 3                    | 3      |
| 7.         |             | Holistic Personality Development and Behavioral Skills | EEC      | 2               | 0 | 0  | 2                    | 1      |
| 8.         |             | Life Skill IV – Public Speaking Practices              | EEC      | 2               | 0 | 0  | 2                    | 1      |
| PRACTICALS |             |                                                        |          |                 |   |    |                      |        |
| 9.         |             | Strength of Material & Fluid Mechanics Laboratory      | PCC      | 0               | 0 | 4  | 4                    | 1.5    |
| 10.        |             | Design & Manufacturing Laboratory (CAAD/CAM)           | PCC      | 0               | 0 | 4  | 4                    | 1.5    |
| TOTAL      |             |                                                        |          | 23              | 0 | 10 | 32                   | 24     |

### SEMESTER-V

| S.No.            | COURSE CODE | COURSE TITLE                                        | CATEGORY | PERIOD PER WEEK |   |    | TOTAL CONTACT PERIOD | CREDIT |
|------------------|-------------|-----------------------------------------------------|----------|-----------------|---|----|----------------------|--------|
|                  |             |                                                     |          | L               | T | P  |                      |        |
| THEORY           |             |                                                     |          |                 |   |    |                      |        |
| 1.               |             | Design of Transmission System                       | PCC      | 4               | 0 | 0  | 3                    | 3      |
| 2.               |             | Design for Manufacturing & Assembly                 | PCC      | 3               | 0 | 1  | 3                    | 3      |
| 3.               |             | Heat and Mass Transfer                              | PCC      | 3               | 0 | 1  | 4                    | 4      |
| 4.               |             | Automobile Engineering                              | PCC      | 3               | 0 | 1  | 4                    | 3      |
| 5.               |             | Life Skill IV                                       | EEC      | 2               | 0 | 0  | 2                    | 1      |
| 6.               |             | Professional Elective II                            | PEC      | 3               | 0 | 0  | 3                    | 3      |
| 7.               |             | Open Elective - III                                 | OEC      | 3               | 0 | 0  | 3                    | 3      |
| PRACTICALS       |             |                                                     |          |                 |   |    |                      |        |
| 8.               |             | Thermal & HMT Laboratory                            | PCC      | 0               | 0 | 4  | 4                    | 1.5    |
| 9.               |             | Product Design Lab (CATIA)                          | PCC      | 0               | 0 | 4  | 4                    | 1.5    |
| MANDATORY COURSE |             |                                                     |          |                 |   |    |                      |        |
| 10.              |             | Essence of Indian Traditional Knowledge and Science | MC       | 0               | 0 | 1  | 1                    | 0      |
| TOTAL            |             |                                                     |          | 21              | 0 | 12 | 31                   | 23     |

### SEMESTER-VI

| S.No.            | COURSE CODE | COURSE TITLE                                     | CATEGORY | PERIOD PER WEEK |   |   | TOTAL CONTACT PERIOD | CREDIT |
|------------------|-------------|--------------------------------------------------|----------|-----------------|---|---|----------------------|--------|
|                  |             |                                                  |          | L               | T | P |                      |        |
| THEORY           |             |                                                  |          |                 |   |   |                      |        |
| 1.               |             | Finite Element Analysis                          | PCC      | 4               | 0 | 0 | 4                    | 4      |
| 2.               |             | Mechanical, Electrical, and Plumbing Engineering | ESC      | 3               | 0 | 1 | 4                    | 3      |
| 3.               |             | Metrology & Quality Control Engineering          | PCC      | 3               | 0 | 0 | 3                    | 3      |
| 4.               |             | Oil and Gas Piping Engineering                   | PCC      | 3               | 0 | 0 | 3                    | 2      |
| 5.               |             | Professional Elective III                        | PEC      | 3               | 0 | 0 | 3                    | 3      |
| 6.               |             | Open Elective – IV                               | OEC      | 3               | 0 | 0 | 3                    | 3      |
| 7.               |             | Life Skill IV                                    | EEC      | 2               | 0 | 0 | 2                    | 1      |
| PRACTICALS       |             |                                                  |          |                 |   |   |                      |        |
| 8.               |             | Engineering Analysis Laboratory                  | pcc      | 0               | 0 | 2 | 2                    | 2      |
| MANDATORY COURSE |             |                                                  |          |                 |   |   |                      |        |
| 9.               |             | Behavioral Science and Physcology                | MC       | 1               | 0 | 0 | 1                    | 0      |
| TOTAL            |             |                                                  |          | 26              | 0 | 9 | 31                   | 21     |

### SEMESTER-VII

| S.No.      | COURSE CODE | COURSE TITLE                        | CATEGORY | PERIOD PER WEEK |   |   | TOTAL CONTACT PERIOD | CREDIT |
|------------|-------------|-------------------------------------|----------|-----------------|---|---|----------------------|--------|
|            |             |                                     |          | L               | T | P |                      |        |
| THEORY     |             |                                     |          |                 |   |   |                      |        |
| 1.         |             | Additive Manufacturing (3D Printing | PCC      | 3               | 0 | 1 | 4                    | 3      |
| 2.         |             | Professional Elective IV            | PEC      | 3               | 0 | 0 | 3                    | 3      |
| PRACTICALS |             |                                     |          |                 |   |   |                      |        |
| 3.         |             | Internship                          | EEC      | 0               | 0 | 4 | 4                    | 4      |
| TOTAL      |             |                                     |          | 6               | 0 | 5 | 11                   | 10     |

### SEMESTER-VIII

| S.No.      | COURSE CODE | COURSE TITLE         | CATEGORY | PERIOD PER WEEK |   |   | TOTAL CONTACT PERIOD | CREDIT |
|------------|-------------|----------------------|----------|-----------------|---|---|----------------------|--------|
|            |             |                      |          | L               | T | P |                      |        |
| THEORY     |             |                      |          |                 |   |   |                      |        |
| 1.         |             | Management Course-I  | HSMC     | 3               | 0 | 0 | 3                    | 3      |
| 2.         |             | Management Course-II | HSMC     | 3               | 0 | 0 | 3                    | 3      |
| PRACTICALS |             |                      |          |                 |   |   |                      |        |
| 3.         |             | Project work         | EEC      | 0               | 0 | 4 | 4                    | 7      |
| TOTAL      |             |                      |          | 6               | 0 | 4 | 10                   | 13     |

**Total Credit: 160**

| CATEGORY                              | I         | II        | III       | I<br>V         | V         | VI        | VII       | VIII      | Credits    | (%)          | As Per<br>AICTE |
|---------------------------------------|-----------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|------------|--------------|-----------------|
| <b>BSC</b>                            | 8         | 7         | 4         | -              | -         | -         | -         | -         | 19         | 13.095       | 29              |
| <b>HSMC</b>                           | 1         | 1         | -         | -              | -         | -         | -         | 6         | 8          | 7.738        | 12              |
| <b>ESC</b>                            | 9         | 8         | -         | 4              | -         | 3         | -         | -         | 24         | 11.309       | 27              |
| <b>PCC</b>                            | 3         | 5         | 15        | 1<br>2         | 16        | 11        | 3         | -         | 65         | 43.452       | 58              |
| <b>PEC</b>                            | -         | -         | -         | 3              | 3         | 3         | 3         | -         | 12         | 7.140        | 9               |
| <b>EEC/ Project Work / Internship</b> | 2         | 1         | 2         | 2              | 1         | 1         | 4         | 7         | 20         | 10.123       | 16              |
| <b>OEC</b>                            | -         | -         | 3         | 3              | 3         | 3         | -         | -         | 12         | 7.142        | 9               |
| Non- Credit*/<br>(Mandatory)          | -         | 0         | -         | -              | -         | -         | -         | -         | 0          | 0.010        | 0               |
| <b>TOTAL</b>                          | <b>23</b> | <b>22</b> | <b>24</b> | <b>2<br/>4</b> | <b>23</b> | <b>21</b> | <b>10</b> | <b>13</b> | <b>160</b> | <b>100.0</b> | <b>160</b>      |