**Structure for B.TECH. Mechanical Engineering (Pattern A-14 Revised)**

**Academic Year – 2017-18**

**Module –VII**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Course | Course Code | Course Name | Course  | Contact Hours / Week | Assessment Scheme | Total Marks | Credits |
| Type | ISA  | ISA | MSE | ESE |
|   | Breakup |
|   | Theory | Project based Lab | Regular Lab  | CA | MSA | ESA |
| S1 | ME401THP | CAD/CAM/CAE  | THP | 3 | 2 |   | 30 | 20 | 50 | 30 | 35 | 35 | 100 | 4 |
| S2 | ME402THP | Design of Mechanical Systems | THP | 3 | 2 |   | 30 | 20 | 50 | 30 | 35 | 35 | 100 | 4 |
| S3 | ME403THL | Vibration Analysis | THL | 3 |   | 2 | 30 | 20 | 50 | 30 | 35 | 35 | 100 | 4 |
| S4 | ME404THL | Refrigeration and Air Conditioning | THL | 3 |   | 2 | 30 | 20 | 50 | 30 | 35 | 35 | 100 | 4 |
| S5 | ME405PRJ | Project work | PRJ |   | 10 |   | 30 | 20 | 50 | 100 | - | - | 100 | 5 |
| TOTAL | 12 | 14 | 4 |   |   |   |   |   |   |   | 21 |

**Structure for B.TECH. Mechanical Engineering (Pattern A-14 Revised)**

**Academic Year – 2017-18**

**Module-VIII**

**Option-A (six months internship based)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Course | Course Code | Course Name | Course  | Contact Hours / Week | Assessment Scheme | Total Marks | Credits |
| Type | ISA  | ISA | CT | ESE |
|   | Breakup |
|   | Th. | Project based Lab | Regular Lab  | CA | MSA | ESA |
| S1 | -- | Elective  | OPE |   |   |   |   |   |   |   | - | 100 | 100 | 3 |
| S2 | ME406INT | Industrial In-Plant Training  | INT |   |   |   |   |   |   |   | - | 100 | 100 | 8 |
| S3 | ME407PRJ | Project work | PRJ |   |   |   |   |   |   |   | - | 100 | 100 | 6 |
| S4 | ME408CVV | CVV  | CVV |   |   |   |   |   |   |   |   | 100 | 100 | 4 |
| TOTAL | - | - | - |   |   |   |   |   |   |   | 21 |

**S1 -Open elective selected as per recommendation of company**

**S4 -CVV based on S1, S2 & S3 (Report, presentation and Viva)**

**Structure for B.TECH. Mechanical Engineering (Pattern A-14 Revised)**

**Academic Year – 2017-18**

**Module-VIII**

**Option-B (4 Elective & Project based)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Course | Course Code | Course Name | Course  | Contact Hours / Week | Assessment Scheme | Total Marks | Credits |
| Type | ISA  | ISA | MSE | ESE |
|   | Breakup |
|   | Th. | Project based Lab | Regular Lab  | CA | MSA | ESA |
| S1 | - | Elective –I\* | - | 3 | 2 |   | 30 | 20 | 50 | 30 | 35 | 35 | 100 | 4 |
| S2 | - | Elective –II\* | - | 3 | 2 |   | 30 | 20 | 50 | 30 | 35 | 35 | 100 | 4 |
| S3 | - | Elective –III\* | - | 3 | 2 |   | 30 | 20 | 50 | 30 | 35 | 35 | 100 | 4 |
| S4 | - | Elective –IV\* | - | 3 | 2 |   | 30 | 20 | 50 | 30 | 35 | 35 | 100 | 4 |
| S5 | ME409PRJ | Project work | PRJ |   | 10 |   | 30 | 20 | 50 | 100 | - | - | 100 | 5 |
| TOTAL | 12 | 18 | - |   |   |   |   |   |   |   | 21 |

**\*** Course type of electives may be **THP** or **THL** or **TPL**

Electives (2017-18)

|  |  |  |
| --- | --- | --- |
| Elective | Course Code | Course name |
| Elective -I | ME410TLP | Tribology |
| ME411THP | Dynamic -Kinemetics |
| ME412THP | Heat Exchange Devices  |
| Elective -II | ME413TLP | Power Plant Engineering  |
| ME414THP | Turbomachines  |
| ME415THP | Industrial Fluid Power  |
| Elective -III | ME416THP | Robotics  |
| ME417THP | Finite Element Method  |
| ME418THP | Optimization Techniques & Operation Research  |
| Elective -IV | ME419THP | Non Conventional Energy Sources  |
| ME420THP | Automobile Engineering  |
| ME421THP | Hybrid Electric Vehicles- Performance & Environment Impact  |