**ANURAG GROUP OF INSTITUTIONS**

(Formerly CVSR COLLEGE OF ENGINEERING)

Venkatapur (V), Ghatkesar (M), R. R. Dist.

**(Autonomous)**

**DEPARTMENT OF MECHANICAL ENGINEERING**

Name of the Course: **THERMAL ENGINEERING - I**

Name of the course coordinator: **Dr. P. RAVIKANTH RAJU**

**Course Outcomes:**

After completion of this course, the students will be able to:

1. Make students familiar with the design and operating characteristics of modern internal combustion engines.
2. Understand the thermodynamics, combustion, heat transfer, friction and other factors affecting engine power, efficiency and emissions
3. Understand students to the environmental and fuel economy challenges facing the internal combustion engine technology and market trends.
4. Sketch the diagram of processes involved in spark ignition and compression ignition.
5. Describe the working of various compressors

**Articulation matrix of CO’s with PO’s and PSO’s**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Program Outcome’s** | | | | | | | | | | | | **PSO’s** | | |
| **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO 10** | **PO 11** | **PO12** | **PSO1** | **PSO2** | **PSO3** |
| **CO1** | **3** | **3** | **3** | **-** | **-** | **2** | **3** | **1** | **-** | **1** | **3** | **3** | **3** | **2** | **3** |
| **CO2** | **3** | **3** | **3** | **-** | **-** | **2** | **3** | **1** | **-** | **1** | **3** | **2** | **3** | **1** | **3** |
| **CO3** | **3** | **3** | **3** | **3** | **2** | **-** | **-** | **-** | **1** | **-** | **2** | **2** | **3** | **1** | **3** |
| **CO4** | **3** | **3** | **3** | **3** | **-** | **-** | **-** | **-** | **1** | **-** | **2** | **-** | **2** | **-** | **2** |
| **CO5** | **3** | **3** | **3** | **3** | **-** | **-** | **3** | **2** | **2** | **-** | **-** | **-** | **2** | **-** | **2** |
| **AVG** | **3** | **3** | **3** | **3** | **2** | **2** | **3** | **1** | **1** | **1** | **3** | **2** | **3** | **1** | **3** |

***Note*: 1 - Slight**

**2 - Moderate**

**3 - Substantial**

**Signature of the Course Coordinator**