**19ME11P2- ENGINEERING WORKSHOP**

(Common to CSE, EEE, ECE & IT)

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| **Course Category:** | Engineering Science | **Credits:** | 1 |
| **Course Type:** | Practical | **Lecture - Tutorial - Practical:** | 0 - 0 – 2 |
| **Prerequisite:** | No Prerequisite | **Sessional Evaluation :**  **External Evaluation:**  **Total Marks:** | 40  60  100 |

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| **Course**  **Objectives** | Students undergoing this course are expected to understand: | |
| 1. To understand the usage of work shop tools and prepare the models in the trades such as carpentry, fitting, sheet metal & foundry. 2. To understand and demonstrate the usage of tools of welding, black smithy and machine tools. 3. To understand the usage of wiring tools and to execute house wiring connections. | |
| **Course Outcomes** | Upon the successful completion of the course, the students will be able to: | |
| CO1 | Identify, Distinguish and Choose the tools of various trades (carpentry, fitting, sheet metal, foundry, wiring, welding, black smithy and machine tools). |
| CO2 | Demonstrate and Describe the usage of tools of various trades (carpentry, fitting, sheet metal, foundry, wiring, welding, black smithy and machine tools). |
| CO3 | Documenting the procedure adopted while preparing the model. |
| **Course**  **Content** | 1. **Carpentry**: Half Lap, Mortise and Tenon and Bridle joint. 2. **Fitting:** Square, V, half round and dovetail fittings 3. **Tin-Smithy:** Tray, cylinder, hopper, cone 4. **House-wiring:** One lamp controlled by one switch, Two lamps (bulbs) controlled by two switches independently, Stair - case connection, Two lamps controlled by on switch in parallel and Water pump connected with single phase starter. 5. **Foundry**: single-piece pattern and Two- piece pattern   **TRADES FOR DEMONSTRATION:**   1. Machine Tools 2. Welding 3. Black Smithy | |
| **Text Books** | 1. Engineering Work shop practice for JNTU, V. Ramesh Babu, VRB Publishers Pvt. Ltd,2009  2. Work shop Manual / P.Kannaiah/ K.L.Narayana/ SciTech Publishers,20 | |

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| Contribution of Course Outcomes towards achievement of Program Outcomes (3-High, 2-Medium, 1-Low) | | | | | | | | | | | | | | |
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| CO1 | 3 | 3 | 2 | - | 3 | 2 | - | - | - | - | 3 | 3 | - | - |
| CO2 | 3 | 3 | 2 | - | 3 | 3 | - | - | - | - | 3 | 3 | - | - |
| CO3 | 3 | 3 | 3 | - | 3 | 2 | - | - | - | - | 3 | 2 | - | - |
| CO4 | 3 | 3 | 2 | - | 2 | 3 | - | - | - | - | 2 | 2 | - | - |
| CO5 | 3 | 3 | 2 | - | 3 | 2 | - | - | - | - | 3 | 2 | - | - |
| CO6 | 3 | 3 | 2 | - | 2 | 2 | - | - | - | - | 2 | 2 | - | - |