MANUFACTURING TECHNOLOGY - II

Course Code: 13ME1118

Course Educational Objectives:
To make the student to understand
- Course educational basic principles of theory of metal cutting
- Machine tools like lathe, shaping, slotting, planning, milling, drilling and grinding machines.
- Various surface finishing operations
- The importance of jigs and fixtures

Course Outcomes:
Student will be in a position to
- Apply the knowledge of course in solving the industrial problems and meeting the production targets by choosing the proper input parameters for machine tools.
- Explain the mechanisms of working and material removal of conventional machine tools
- Explain the influence of cutting parameters on output parameters

UNIT-I (12 Lectures)

UNIT-II (12 Lectures)

**UNIT-III**  
(14 Lectures)

Shaping, slotting and planning: Principle of working—principle parts—specification, classification, operations performed, machining time calculation.

Drilling and boring: Principle of working, specifications, types, and operations performed—tool holding devices—twist drill—boring machines—fine boring machines—jig boring machine, deep hole drilling machine.

**UNIT-IV**  
(14 Lectures)


Jigs and fixtures: Classification of Jigs and Fixtures—Principles of location and clamping—Types of clamping and work holding devices. Typical examples of jigs and fixtures

**UNIT-V**  
(12 Lectures)


Lapping, honing and broaching: Comparison to grinding—lapping and honing, broaching—types of broaching machines, broaching tools, broaching operations.

**TEXT BOOK:**

REFERENCES:

