

4ME4-23: PRODUCTION PRACTICE LAB

Turning Shop- <https://youtu.be/XXpOwsD0fWM>

- 1 To study lathe machine construction and various parts including attachments, lathe tools cutting speed, feed and depth of cut
- 2 To perform step turning, knurling and chamfering on lathe machine as per drawing
- 3 To cut multi-start Square/Metric threads on lathe machine.
- 4 Boring using a boring bar in a centre lathe and cut BSW/Metric internal threads on lathe machine.
- 5 To perform taper turning using compound rest.

Machine shop - <https://youtu.be/IU9leYwirRg>

- 1 To study the milling machine, milling cutters, indexing heads and indexing methods and to prepare a gear on milling machine.
- 2 To machine a hexagonal /octagonal nut using indexing head on milling machine.
- 3 To study of single point cutting tool geometry and to grind the tool as per given tool geometry.
- 4 To study shaper machine, its mechanism and calculate quick return ratio. To prepare a job on shaper from given mild steel rod.
- 5 Cylindrical grinding using grinding attachment in a centre lathe

Demonstration and study - https://youtu.be/DKF5dKo_r_Y

- 1 Demonstration for job by eccentric turning on lathe machine.
- 2 Study of capstan lathe and its tooling and prepare a tool layout & job as per given drawing.
- 3 Demonstration on milling machine for generation of plane surfaces and use of end milling cutters.
- 4 Grinding of milling cutters and drills.

Foundry Shop- https://youtu.be/z_ggHbN3NtU

- 1 To prepare mould of a given pattern requiring core and to cast it in aluminium.
- 2 To perform moisture test and clay content test.
- 3 To perform permeability test

4 A.F.S. Sieve analysis test.

5 Strength Test (compressive, Tensile, Shear Transverse etc. in green and dry conditions) and Hardness Test (Mould and Core).

Welding Shop - <https://youtu.be/a9Axt2RuWAg>

1 Hands-on practice on spot welding.