



**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Syllabus for Bachelor of Vocation (B.Voc.), 6th Semester**  
**Branch: Production Technology**  
**Subject Name: Tool and Die Maker**  
**Subject Code: 21160306**

**Type of course:** Zeal to learn the subject

**Prerequisite:** Basic Knowledge of Production Technology

**Rationale:** Perform breakdown service for a range of mechanical equipment such as machine tools, process control equipment, rotating mechanical equipment, conveyors, equipment for lifting and handling, process plant equipment, in accordance with approved procedures.

**Teaching and Examination Scheme:**

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
0	0	15	15	0	0	100	100	200

Sr. No.	Topic	No. of Hours
01	<b>Plan and coordinate the making of tool and die:</b> Interpret engineering drawing to understand sequence of operations, material requirement and also prepares a detailed scheduling of the manufacturing process	35
02	<b>Perform fitting operation:</b> Perform fitting operations as per the instruction sheet/job using hand tools and manually operated machines. The fitting operation may include filing, drilling, chiselling, thread cutting, lapping etc.	40
03	<b>Grind surface using hand and/or handheld power tool:</b> Grind surface using hand and/or handheld power tools on ferrous and non-ferrous materials and components.	30
04	<b>Operate conventional milling machine:</b> Perform milling operations on various materials and produce various features using Vertical or Horizontal milling machine.	25
05	<b>Operate conventional turning machine:</b> Perform turning operation to produce various features using canter or turret lathe	25
06	<b>Perform assembly operation:</b> Perform drilling, tapping, reaming, and assembly operations using various machine tools and assembly components.	25
07	<b>Basic health and safety practices at the workplace:</b> Identify risks and hazards at workplace, use of PPE, and apply good housekeeping practices, etc.,	10
08	<b>Work effectively with others:</b> Effectively communicate with others and demonstrate good ethical practices and discipline.	10
	<b>Total</b>	200



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**Course Outcome:**

<b>Sr. No.</b>	<b>CO statement</b>	<b>Marks % weightage</b>
CO 1	To plan and coordinate making of tool and die	15
CO 2	Perform different hand operation using hand tools	25
CO 3	Operate different conventional machines: lathe, milling, grinding etc	25
CO 4	Performing assembly operation using various machine tool	25
CO 5	Basic health and safety practices at the workplace	5
CO 6	Work effectively with others	5

**List of Open Source Software/learning website:**

<https://nptel.ac.in>