

**GUJARAT TECHNOLOGICAL UNIVERSITY****Syllabus for Bachelor of Vocation (B.Voc), 6th Semester****Branch: Production Technology****Subject Name: On-Job Training (Elective): Tool & Die Maker-II****Subject Code: 1160304****With effective
from academic
year 2018-19****Prerequisite:** Zeal to learn the subject**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	Plan and coordinate the making of tool and die: Interpret engineering drawing to understand sequence of operations, material requirement and also prepares a detailed scheduling of the manufacturing process	30
02	Perform fitting operation: 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	Grind surface using hand and/or handheld power tool: Grind surface using hand and/or handheld power tools on ferrous and non-ferrous materials and components.	30
04	Operate conventional milling machine: Perform milling operations on various materials and produce various features using Vertical or Horizontal milling machine.	25
05	Operate conventional turning machine: Perform turning operation to produce various features using canter or turret lathe.	25
06	Perform assembly operation: Perform drilling, tapping, reaming, and assembly operations using various machine tools and assembly components.	20
07	Basic health and safety practices at the workplace: Identify risks and hazards at workplace, use of PPE, and apply good housekeeping practices, etc.,	5
08	Work effectively with others: Effectively communicate with others and demonstrate good ethical practices and discipline.	5

Distribution of marks weightage for cognitive level:

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
10	15	40	10	5	5

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.



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Reference Books:

1. Audels Machinists and Tool Makers Handy Book BY Graham, Frank D
2. Die Makers Handbook by Jerry Arnold
3. Die Design Fundamentals by Vukota Boljanovic
4. Tool and Die Making Troubleshooter by Richard M. Leed

Course Outcome:

Sr. No.	CO statement	Marks % weightage
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
CO5	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>,