

**GUJARAT TECHNOLOGICAL UNIVERSITY****Syllabus for Bachelor of Vocation (B.Voc), 1st Semester****Branch: Production Technology****Subject Name: Metrology and Measuring Instruments Lab****Subject Code: 1110305****With effective
from academic
year 2018-19****Teaching and Examination Scheme:**

Teaching Scheme			Credits	Examination Marks						Total Marks
L	T	P		Theory Marks			Practical Marks			
				ESE (E)	PA (M)		PA(V)		PA (I)	
				PA	ALA	ESE	OEP			
00	00	02	02	00	00	00	30	00	20	50

L- Lectures; P- Practical; OJT- On Job Training; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

Content:

Sr. No.	Topic	No. of Hours	% Weightage
01	Measurement of angle with the help of sine bar/ Vernier Bevel protractor.	2	
02	Study and sketch of various types of optical projectors.	2	
03	Study and sketch of various types of comparators and use them for comparing length of given piece.	2	
04	To measure the diameter of a hole with the help of precision balls.	2	
05	To measure external and internal taper with the help of taper gauges, precision rollers.	2	
06	To test the squareness of a component with auto-collimeter.	1	
07	To measure the pitch, angle and form of thread of a screw.	2	
08	To measure the geometry of a gear having involute profile.	2	
09	To measure the straightness of the edge of a component with the help of auto-collimeter.	1	
10	To measure the length, breadth, thickness, depth, height with micrometer.	2	
11	To measure the length, breadth, thickness, depth, height, with height gauge and Vernier calipers.	1	
12	Calibration of Vernier calipers/micrometers.	1	

Reference Books

- Metrology: RK Jain
- Mechanical Measurement: RK Jain