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		2001 -	- ENG	INEE	RING DE	AWI	NG - I				
Teachin	g Schedule P	er Week	Pro	gressive	:	Exa	mination	Schedu	le (Ma	rks)	
Lectures	Practical	Credits	Assessment		t	Theory			Practical Ex.		
2	4	6	50	Т	4Hrs	i. 1	00	÷		150	
Pre-requisite		Source	0		Theory	Test	Total	TW	PR	Gr Total	
N	ri l	MCL	Sen	iester	-	-	-	100	_	100	

I EVEL-TT COURSES

RATIONALE/ Competencies to be achieved: -

KATIONALE: Competencies to be achieved: To be able to identify drawing instruments and state the use.
Given a situation, student should be able to select required instruments:
Given a drawing, student should be able to point out errors and rectify the defects.
Given the drawing either pictorial or orthographic/ isometric/ auxiliary drawing- student should be able to reduce the select required instruments. read and interpret the same.
Student should be able to draw/ sketch freehand proportionate drawing of the object named.
Given a description, student should be able to prepare a suitable drawing. $\mathbf{i} \in [$

COURSE CONTENT	Hrs	Mks
INTRODUCTION	ì	
Importance of engineering drawing as a means of communication, difference between an artistic drawing and an engineering drawing.		
 INSTRUMENTS Drafting medium, mini drafter, pencils- grades and application, pens, compass. divider, templates, eraser, tapes (fixing) and stencils. 	1	-
3. LINE WORK Visible out lines, section lines, leader lines, projection lines, short break lines, long break lines, hidden lines, centre lines and special requirement lines. Scales- Reduction scales, magnifying scales, full-scale etc. use of scales.	3	6
4. DRAWING	8	20
 Hexagon – given distance across the corners/ flats. To draw regular polygon in a circle, an octagon in a circle. To draw regular polygon given a side. Two methods- semi-circle method excluded. To draw an arc of given radius touching two given lines making one angle. To draw a circle of given radius touching two given circles externally. To draw an ellipse by arc of circle method, focus directrix & concentric circle method. To draw parabola by -Directrix method, Rectangle method. To draw normal and tangent to above curves from given point on the curve. To draw cycloid- generating circle rolling on straight line. To draw involute-semi circle method excluded. 		
 5. ORTHOGRAPHIC PROJECTIONS Third angle method of projection; first angle method of projection. Conversion of simple pictorial views into orthographic views. Dimensioning techniques: - General principles, functional dimension, auxiliary dimension, non-functional dimension, element of dimensioning, projection lines, dimension lines, leader lines, indicating dimensional values on the drawing, termination and origin indication, chain dimensioning – methods of dimensioning. Ref. ISE - Sp : 46 - 1998 for details and figures. 	5	20

HUMAN RESOURCE AND CURRICULUM CELL, DIRECTORATE OF TECHNICAL EDUCATION, _ SECOND EDITION, 2000

. MISSING VIEWS	4	20	
Methods of projecting: - Side view from given front view and top view, front view			
from given side view and top view, top view from given front view & side view.			
To find the missing dimensions by referring to given views.			
ISOMETRIC PROJECTIONS	5	19	
ntroduction; Natural scale - Isometric scale.	5	10	
sometric projection and isometric view; the difference between them.			
Conversions of planes into isometric view like, square, rectangular and circle.			
Drawing isometric views of solids like, prism, pyramid cylinder, cone, cube and			
frustum of these solids; Conversion of simple orthographic views into isometric			
views having inclined lines and curves - slots and holes.		u -	
AUXILIARY VIEWS	3	10	
ntroduction - Meaning of auxiliary views, need for auxiliary views, auxiliary planes	2		
types of auxiliary views; primary auxiliary views only.			
Drawing auxiliary views from given two orthographic views			
FREE-HAND SKETCHING	า่	¢	- ^
The hand proportionate sketches of simple machine parts mantioned hal		0	
Hexagonal headed bolts, washer and nut threads to be indicated conventionally is	а. ^ж		
By drawing two lines. Woodruff Key, Feather Key, Gib-headed key, Grib account			
Round head, Counter sunk head.			
Total		100	~
	32	100	
LS. 090 fatest Edition	· ·		
Geometrical and Machine Drawing by N.D. Bhatt			
Machine Drawing by G. R. Nagpal.			
Engineering Drawing for 1 st year Diploma by Viranda publication Jalgaon.	2 ⁰⁰⁰⁰ 20 3		
Engineering Drawing I by Gopal Krishna.	10.0		
For chapters 5 6 7 and 9 and - (-) () () () (TIDE DD ()) (1) DO ()) () () () () () () () () (8.1.8.	4, 8.5,	
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8. 8. 8. 10, 8. 12 & 8. 13.) (b) ENGG. DRAWING by F. J. Shah (Fig. 17. 36 pg. 485) 4. Textback of Englishing B. K. Dh. Shah (Fig. 17. 36 pg. 485)			
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