SCHEMEOFCOURSEWORK

CourseDetails:

CourseTitle	ENGINEERING DRAWING								
CourseCode	22ES11ED	L	T	P	C	1	0	4	3
Program:	B.Tech.								
Specialization:	Computer Science and Engineering								
Semester	II								
Prerequisites									
Coursestowhichitisaprerequisite	N/A								

CourseOutcomes(COs): Thestudentwillbeableto

1	illustratevariouscurvesappliedinengineering
2	showprojectionsoflinesandplanesgraphically
3	showprojectionsofsolidsandsectionsofsolidsgraphically
4	development ofsurfacesofregularsolidsusingCADpackages
5	useCADpackagestodrawisometricandorthographicdrawings

ProgramOutcomes (POs): Agraduateofchemicalengineeringwillbe able to

1	Able toapplytheknowledgeofmathematics,science,engineeringfundamentalsto solvecomplexchemicalengineeringproblems.
2	Attainthecapabilitytoidentify,formulateandanalyseproblems relatedtochemicalengineeringandsubstantiatetheconclusions.
3	Inapositiontodesignsolutionsforchemicalengineeringproblemsanddesignsystem componentsandprocessesthatmeetthespecifiedneedswithappropriateconsiderationtopublichealthandsafety.
4	Abletoperformanalysisandinterpretationofdatabyusingresearchmethodssuchas designofexperimentstosynthesize theinformationand toprovide validconclusions.
5	Abletoselectandapplyappropriatetechniquesfromtheavailableresourcesandmodernchemicalengineeringandsoftwaretools,andwillbeabletopredictandmodelcomplex engineeringactivitieswithanunderstandingofthepracticallimitations.
6	Abletocarryouttheirprofessionalpracticeinchemicalengineeringbyappropriatelyconsideringandweighingtheissuesrelatedtosocietyand culture andthe consequentresponsibilities.
7	Abletounderstandtheimpactoftheprofessionalengineeringsolutionsonenvironmentalsafety.
8	Transformintoresponsiblecitizensbyresortingtoprofessionalethicsandnormsoftheengineeringpractice.
9	Abletofunctioneffectivelyinindividual capacityaswellasamemberindiverseteamsandinmultidisciplinarystreams.
10	Abletocommunicatefluentlyoncomplexengineeringactivitieswiththeengineeringcommunityand society,andwillbe ableto preparereportsandmake presentations effectively.
11	Abletoapplyknowledgeoftheengineeringandmanagementprincipleswhilemanagingprojectsinmulti disciplinaryenvironments.
12	Engage inindependentandlife-longlearningintheirspecializedareasofchemicalengineering.

CourseOutcomeVersus**ProgramOutcomes:**

COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
CO 1	3			2											
CO 2	3			2											
CO 3	3			2											
CO 4	3			2	3										
CO 5	3			2	3										

S-Stronglycorrelated,*M-Moderately* correlated,*Blank-Nocorrelation*

Assessment	Daytodayevaluation/Mid-TestI&II/End

Teaching-LearningandEvaluation

Week	Topic / Contents	Course Outcomes	SampleQuestions	*Teaching-LearningStrategy	Assessment Method &Schedule
1	Introductiontoengineeringgraphicsandtheirsignificance — Conventionsin drawing,lettering and BISconventions.			Lecture Drawing practice	
2	ConstructionofConicsections includingtherectangular hyperbola-generalmethodonly	CO 1	Constructaparabola,whenthe distance of the focus fromthe directrixis50mm	Lecture Drawing practice	Continuous Evaluation
3	Cycloid,epicycloids,hypocycloid,involuteofthecircle	CO 1	A circle of 50 mm diameterrolls on the circumference ofanothercircleof175mmdiameter and outside it. Tracethelocusof apointonthecircumferenceof therollingcircleforonecomplet erevolution.Namethecurve.Draw a tangent and a normaltothecurveatapoint125 mmfromthecentreofthedirectingcircle.	Lecture Drawing practice	Continuous Evaluation

4	Projectionsofpointsinanyquadrant Projectionsoflinesinclinedtooneplane	CO 2	1.Statethequadrantsinwhichthefollowingpointsaresituated: (a) A point P; its top viewis 40 mm above xy; the frontview, 20 mm below the topview. (b) ApointQ,itsprojections coincidewitheachother 40mmbelowxy. 2.The lengthofthe topview	Lecture Drawing practice	Continuous Evaluation
			of a line parallel to the V.P.andinclinedat 45°totheH.P.is 50 mm. One end of the lineis 12 mm above the H.P. and25mm infront of the V.P.Drawtheprojectionsof thelineanddetermineitstruelength.		
5	Projections of lines inclined tobothplanes	CO 2	AlinePQ75mmlong, hasitsend P in the V.P. and the endQintheH.P.Thelineisinclinedat30°totheH.P.andat60° to the V.P. Draw itsprojections.	Lecture Drawing practice	Continuous Evaluation
6	Projectionsofplanesinclinedtooneplane Projectionsofplanesinclinedtoboththeplanes	CO 2	1. A regular pentagon of25 mm side has one side ontheground.Itsplaneisinclinedat 45°totheH.P.andperpendiculartotheV.P.Drawitsprojections andshowitstraces. 2. Arectangularplanesurfaceofsize LxWispositionedinthefirstquadrant and is inclined at anangleof60°withtheH.P.and 30°withtheV.P.Drawitsprojections.	Lecture Drawing practice	Continuous Evaluation

7	Projectionsofsolidsinclinedtooneplane	CO 3	Dra\cvtheprojectionsofacylinder75mmdiameterand 100rnmlong,lyingonthegroun d with its axis inclinedat 30° to the V.P. and paralleltotheground.	Lecture Drawing practice	Continuous Evaluation

8	Section planes and sectionalview of right regular solids-prism, cylinder, pyramid andcone	CO 3	A hexagonal pyramid, base 30mmsideandaxis 70 mm long is resting on itsslant edge of the face on thehorizontalplane.	Lecture Drawing practice	Continuous Evaluation
9	Labinternalexam1				
10	Introduction to AutoCAD:Basic drawing and editingcommands,Dimensioningprinciples and conventional representations.			Lecture Drawing practice	
11	Developmentofsurfacesofrightregularsolids-prism,cylinder,pyramid,coneandtheirsectionalparts.	CO 4	Draw the development of thelateral surface of the frustumof the square pyramid of sideof base 30 mm and axis 40mm, resting on HP with oneofthebaseedgesparallelto V.P. It is cut by a horizontalcutting plane at a height of 20mm.	Lecture Drawing practice	Continuous Evaluation
12	Developmentofsurfacesofright regularsolids-prism,cylinder,pyramid,coneandtheirsectionalparts.	CO 4		Lecture Drawing practice	Continuous Evaluation
13	OrthographicProjections:Systemsofprojections,conventionsandapplicationtoorthographicProjections.	CO 5	Draw orthographic projectionsofthegivenbelowFigure.	Drawing practice	Continuous Evaluation
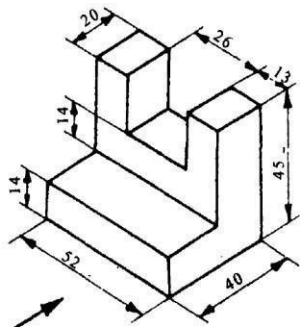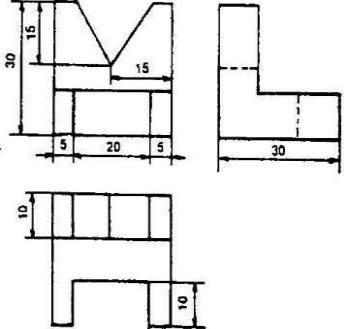
14	OrthographicProjections:Systemsofprojections,conventions and application toorthographicProjections.	CO 5	Alldimensionsareinmm	Lecture Drawing practice	Continuous Evaluation
15	Isometric Projections: Principlesofisometricprojection- Isometricscale;Isometricviews:lines, p1anes,figures,simpleandcompoundsolids	CO 5	DrawisometricprojectionsprojectionsofthegivenbelowFigure.	Lecture Drawing practice	Continuous Evaluation
16	Isometric Projections: Principlesofisometricprojection-Isometricscale;Isometric views: lines, p1anes,figures, simple and compoundsolids	CO 5	Alldimensionsareinmm	Lecture Drawing practice	Continuous Evaluation
17	Labinternalexam2				
18	Endexamination				