

BRANCH: XIV DIPLOMA IN MECHANICAL ENGINEERING (CAD)

Course Code	Course Title	Hours/Week			Credits	Maximum Marks		
			Tutorial	Practical		CA	FE	Total
SEMESTER 1								
THEORY								
X21101	ENGINEERING MATHEMATICS -I	4	1	-	5	25	75	100
X21102	PHYSICS	4	1	-	5	25	75	100
X21103	CHEMISTRY	4	-	-	4	25	75	100
X21104	ENGLISH	4	-	-	4	25	75	100
Q21105	ENGINEERING GRAPHICS-I	2	-	3	3.5	25	75	100
PRACTICALS								
X21151	PHYSICS LABORATORY	-	-	2	1	25	75	100
X21152	CHEMISTRY LABORATORY	-	-	2	1	25	75	100
Q21153	FITTING, SHEET METAL AND WIRING WORKSHOP	-	-	3	1.5	25	75	100
Q21154	INPLANT TRAINING	-	-	3	1.5	-	-	GRADE
X21155	PHYSICAL EDUCATION- I	-	-	2	1	-	-	GRADE
	TOTAL	18	2	15	27.5	200	600	800
SEMESTER 2								
THEORY								
X21201	ENGINEERING MATHEMATICS -II	4	1	-	5	25	75	100
X21202	CALCULUS AND ITS APPLICATIONS	4	1	-	5	25	75	100
Q21203	ENGINEERING PHYSICS	4	-	-	4	25	75	100
Q21204	CHEMISTRY OF ENGINEERING MATERIALS	4	-	-	4	25	75	100
Q21205	ENGINEERING GRAPHICS-II	2	-	3	3.5	25	75	100
PRACTICALS								
Q21251	ENGINEERING PHYSICS LABORATORY	-	-	2	1	25	75	100
Q21252	CHEMISTRY OF ENGINEERING MATERIALS LABORATORY	-	-	2	1	25	75	100
Q21253	BASICS OF COMPUTING AND INFORMATICS	-	-	3	1.5	25	75	100
Q21254	COMMUNICATIVE ENGLISH LABORATORY	1	-	2	2	25	75	100
X21255	PHYSICAL EDUCATION- II	-	-	2	1	-	-	GRADE
	TOTAL	19	2	14	28.0	225	675	900
SEMESTER 3								
THEORY								
Q21301	PROBABILITY AND STATISTICS	4	1	-	5	25	75	100
Q21302	ENGINEERING MECHANICS	4	1	-	5	25	75	100
Q21303	MANUFACTURING TECHNOLOGY	4	-	-	4	25	75	100
Q21304	THERMAL ENGINEERING AND FLUID MECHANICS	4	1	-	5	25	75	100
PRACTICALS								
Q21351	MATERIALS TESTING LABORATORY	-	-	3	1.5	25	75	100
Q21352	APPLIED THERMODYNAMICS LABORATORY	-	-	3	1.5	25	75	100
Q21353	WORKSHOP - MOULDING AND WELDING	-	-	3	1.5	25	75	100
Q21354	COMPUTER AIDED DESIGN AND DRAFTING LABORATORY	-	-	3	1.5	25	75	100
Q21355	ELECTRICAL MACHINES AND ELECTRONIC DEVICES LABORATORY	1	-	3	2.5	25	75	100
	TOTAL	17	3	15	27.5	225	675	900

Legend: **CA**–Continuous Assessment; **FE**–Final Examination;

Course Code	Course Title	Hours/Week			Credits	Maximum Marks		
		Lecture	Tutorial	Practical		CA	FE	TOTAL
SEMESTER 4								
THEORY								
Q21401	THEORY OF MACHINES	4	1	-	4	25	75	100
Q21402	STRENGTH OF MATERIALS	4	1	-	5	25	75	100
Q21403	ENGINEERING MATERIALS AND METALLURGY	4	-	-	4	25	75	100
Q21404	CAD AND GEOMETRIC MODELING	4	-	-	5	25	75	100
PRACTICALS								
Q21451	FLUID MECHANICS AND MACHINERY LABORATORY	-	-	3	1.5	25	75	100
Q21452	3D PART MODELING LABORATORY	-	-	3	1.5	25	75	100
Q21453	METALLOGRAPHY & NDT LABORATORY	-	-	3	1.5	25	75	100
Q21454	MACHINE DRAWING	2	-	3	3.5	25	75	100
Q21455	TECHNICAL COMMUNICATION LABORATORY	1	-	2	2	25	75	100
Q21456	INTERNSHIP [#]	-	-	-	3	-	-	GRADE
	TOTAL	19	2	14	31	225	675	900
SEMESTER 5								
THEORY								
Q21501	DESIGN OF MACHINE ELEMENTS	4	1	-	5	25	75	100
Q21502	DESIGN FOR MANUFACTURE AND ASSEMBLY	4	1	-	5	25	75	100
Q21Exx	ELECTIVE THEORY- I	4	1	-	5	25	75	100
PRACTICALS								
Q21551	METAL CUTTING LABORATORY	-	-	3	1.5	25	75	100
Q21552	3D ASSEMBLY MODELING LABORATORY	-	-	3	1.5	25	75	100
Q21553	FINITE ELEMENT ANALYSIS LABORATORY	1	-	3	2.5	25	75	100
Q21554	PNEUMATIC AND HYDRAULICS SYSTEM LABORATORY	1	-	3	2.5	25	75	100
Q21555	MINI PROJECT AND ENTREPRENEURSHIP	3	-	3	4	25	75	100
	TOTAL	17	3	15	27	200	600	800
SEMESTER 6								
THEORY								
Q21601	CAM AND CIM	4	-	-	4	25	75	100
Q21602	ENGINEERING MANAGEMENT	4	-	-	4	25	75	100
Q21Exx	ELECTIVE THEORY- II	4	1	-	5	25	75	100
PRACTICALS								
Q21651	CNC PROGRAMMING LABORATORY	-	-	3	1.5	25	75	100
Q21652	PLC LABORATORY	-	-	3	1.5	25	75	100
Q21653	ROBOTICS LABORATORY	-	-	3	1.5	25	75	100
Q21654	ENGINEERING METROLOGY LABORATORY	1	-	3	2.5	25	75	100
Q21655	PROJECT WORK AND VIVA VOCE	-	-	9	4	25	75	100
	TOTAL	13	1	21	24	200	600	800

PROGRAM ELECTIVE COURSES (Two Theory to be opted)

Course Code	Course Title	Hours/Week			Credits	Maximum Marks		
		Lecture	Tutorial	Practical		CE	FE	Total
THEORY								
Q21E01	TOOL AND DIE DESIGN	4	1	-	5	25	75	100
Q21E02	PRODUCT LIFE CYCLE MANAGEMENT	4	1	-	5	25	75	100
Q21E03	PRODUCTION MANAGEMENT	4	1	-	5	25	75	100
Q21E04	PRODUCT DESIGN AND DEVELOPMENT	4	1	-	5	25	75	100
Q21E05	INDUSTRIAL DESIGN AND ERGONOMICS	4	1	-	5	25	75	100
Q21E06	AUTOMATED PRODUCTION SYSTEMS	4	1	-	5	25	75	100
Q21E07	TOTAL QUALITY MANAGEMENT	4	1	-	5	25	75	100
		4	1	-	5	25	75	100

Legend: **CA**–Continuous Assessment; **FE**–Final Examination;
-Internship will be arranged for 4 weeks during the vacation at the end of 4th semester.