

2009 - ELEMENTS OF MACHINE DRAWING									
Teaching Schedule Per Week			Progressive Assessment		Examination Schedule (Marks)				
Lectures	Practical	Credits			Theory		Practical Ex.	Total	
2	2	4	50		3Hrs	100	-	150	
Pre-requisite		Source	Semester	Theory	Test	Total	TW	PR	Gr Total
2005		FOD		—	—	—	100	—	100

RATIONALE:- This second course in drawing for diploma in Food technology is designed to develop further manipulative skills and cognitive abilities in the students. Topic 4 aims at developing skill in free hand sketching, which the student will find useful in his day-day-day, work in real industrial situation. The topics 1, 2 and 3 would help in reading and interpreting the actual working drawing of single machine components and topic 5 that of assemblies. At the end of their course, the students should demonstrate adequate skills in drafting and good ability of assembly drawing interpretation.

COURSE CONTENTS		Hrs	Mks
1. METHODS OF SECTIONS		4	18
Review of orthographic projection. Necessity of sectioning; Types of sections: -Full, half-part, offset, revolved, removed and aligned; Cutting Planes. Components not sectioned: - Fasteners, shafts, bearings, webs, ribs, etc. Other conventions; Symbols used for sectioning different materials.			
Drawing of sectional views given a pictorial view of an object/machine component.			
2. MISSING VIEWS		4	18
Interpretation of orthographic views. Drawing missing views from given two; orthographic views. Drawing sectional views from given orthographic views.			
3. ISOMETRIC PROJECTIONS		8	24
Isometric scale. Drawing of isometric view/projection of objects with plane, cylindrical and spherical surfaces and representation of slots on slopping faces.			
4. FREE-HAND SKETCHING		10	24
Screwed Fastenings and their uses: -Square nuts, hexagonal nuts, hexagonal headed bolts, method of prevention of rotation of bolts, hook-bolt, eye-bolt, lifting eye bolt, stud, method of locking a nut - by split pins, set screws, washers, bolts for foundation: Eye bolt, Rag bolt, Lewis bolt.			
Two views of the following assemblies: -Knuckle joint, protected and unprotected flange couplings for shafts, footstep bearing, flanged pipe joints, hydraulic pipe joint, union pipe joint and stuffing box.			
5. ASSEMBLY DRAWING		6	16
Drawing to scale orthographic views of simple details given assembly-drawing of one of the following: - Knuckle joint, protected and unprotected flange shaft couplings, footstep bearing, simple plumber block, flanged pipe joint, hydraulic pipe joint, union pipe joint and stuffing box.			
Total		32	100

