

Lesson Plan

Name of Faculty : Dr. Rajni Kamboj
Discipline : Food Technology
Semester : 3rd
Subject : Engineering Properties of Food (ESC/6-T)
Lesson Plan Duration: 15 Weeks (from August, 2024 to November, 2024)
 Work Load (Lecture/Practical) per week (in hours): **Lectures 03 hours**

Theory			Topic covered Date and Remarks		
Week	Lecture Day	Topic (Including Assignment/Test)	Date	HOD	Director-Principal
1 st	1	Mass, volume, area related properties of foods and their measurement techniques			
	2	Mass, volume, area related properties of foods and their measurement techniques			
	3	Mass, volume, area related properties of foods and their measurement techniques			
2 nd	4	Mass, volume, area related properties of foods and their measurement techniques			
	5	Rheological properties of food: stress, strain, Hooke's law			
	6	Rheological properties of food: stress, strain, Hooke's law			
3 rd	7	Elasticity, Plasticity, ductility			
	8	Flow behavior: Newtonian and Non-Newtonian fluid			
	9	Flow behavior: Newtonian and Non-Newtonian fluid			
4 th	10	Time dependent and independent flow behavior			
	11	Time dependent and independent flow behavior			
	12	Specific heat capacity			
5 th	13	Thermal conductivity			
	14	Enthalpy, thermal diffusivity			
	15	Thermodynamic properties of food: sorption energy			
6 th	16	Thermodynamic properties of food: sorption energy			
	17	Significance of thermal properties			
	18	Properties of dry air, composition of air			
7 th	1st Minor Test				
8 th	19	Properties of dry air, composition of air			
	20	Specific heat of dry air, enthalpy of dry air			
	21	Specific heat of dry air, enthalpy of dry air			
9 th	22	Psychrometric chart			
	23	Application of psychrometric chart in food processing			
	24	Principle, measurement of dielectric properties			
10 th	25	Frequency and temperature dependence of dielectric properties			
	26	Frequency and temperature dependence of dielectric properties			

	27	Composition dependence of dielectric properties			
11 th	28	Composition dependence of dielectric properties			
	29	Assessment of food quality by using dielectric properties			
	30	Effects of processing and storage on dielectric properties of foods			
12 th	31	Effects of processing and storage on dielectric properties of foods			
	32	Surface tension and fundamental consideration			
	33	Surface tension and fundamental consideration			
13 th	34	Gibbs adsorption equation			
	35	Contact angle measurement techniques			
	36	Contact angle measurement techniques			
14th	2nd Minor Test				
15 th	37	Colorimetric properties of food: measurement of colour, colour spectrum etc.			
	38	Colorimetric properties of food: measurement of colour, colour spectrum etc.			
	39	Colorimetric properties of food: measurement of colour, colour spectrum etc.			