- SEMETSER:- IV
- COURSE NO.:- FE-247
- COURSE TITLE:- FOOD PROCESSING EQUIPMENTS- II
- CREDITS:- 3(2+1)

➢ THEORY

NO. OF UNITS	TOPICS	NO. OF LECTURES
1	*Mechanical separations :* *Centrifugation : liquid-liquid centrifugation, liquid- solid centrifugation, clarifiers, de sludging and decanting machines*	*3*
2	*Filtration : Principles involved in filtration. Pressure and vacuum filtration*	*3*
3	*Expression : batch and continuous type*	*3*
4	*Baking, Roasting and Frying equipment*	*3*
5	*Extraction and Leaching, Crystallization and Distillation : Basic principles involved*	*3*
6	*Membrane processes : Ultra filtration, Reverse osmosis*	*3*
7	*Electro dialysis, Pre-evaporation and micro filtration*	*3*
8	*Microwave and Dielectric & Infrared heating : Physical parameters. Heat transfer phenomenon. Equipment and application*	*3*
9	*Irradiation - Principle and its equipments*	*3*
10	*Blending and pulverization equipments*	*3*
	TOTAL	**30**

- PRACTICALS

NO. OF UNITS	TOPICS	NO. OF EXPT.
1	*Lab demonstration on state of water*	*2*
2	*Demonstration of equilibrium sorption isotherms*	*2*
3	*Study of centrifugal separators*	*2*
4	*Study of ultra filtration equipments*	*2*
5	*Study of microwave oven, infrared moisture meter and universal moisture meter*	*2*
6	*Visit to Bakery Plant*	*1*
7	*Study of size reduction machineries*	*2*
8	*Study of size reduction machineries*	*2*
	TOTAL	**15**

- *Reference Books:*

- *Food Engineering operation* — *Brennan, Butters, Cowell and Lilly*
- *Introduction to Food Engineering* — *Heldman D. R. and Singh R. P.*
- *Fundamentals of Food Engineering* — *Charm S. E.*