

Course No.: SEC-111

Course Title: Introduction to Drying Technology and Dryers

TEACHING SCHEDULE

Exercise No.	Exercise Topic/ Title
1	Introduction to drying process and its mechanism
2	Understanding of different methods for moisture estimation
3	Determination of moisture content with oven method
4	Determination of drying characteristics and study of kinetics
5	Prediction of moisture sorption isotherms
6	Determination of equilibrium moisture content of grain
7	Introduction to different dryings theories and its importance
8	Introduction to different methods of drying (Contact, Convective and Radiation).
9	Principle and Operational mechanism involved in Cabinet and Tunnel Drying
10	Principle and Operational mechanism involved in Spray Drying
11	Principle and Operational mechanism involved in Roller/ Drum Drying
12	Principle and Operational mechanism involved in fluidized bed drying
13	Principle and Operational mechanism involved in foam-mat drying
14	Principle and Operational mechanism involved in microwave drying
15	Principle and Operational mechanism involved in vacuum oven drying
16	Principle and Operational mechanism involved in solar drying
17	Principle and Operational mechanism involved in refractance window drying of foods

18	Study of pretreatment methods for drying and dehydration
19	Study of operational principle and working of freeze dryer
20	Study of Rehydration/ Reconstitution properties of dehydrated foods
21	Drying of fruit slices in cabinet drier
22	Drying of green leafy vegetables
23	Drying of mango/ other pulp by foam-mat drying
24	Drying of foods using roller dryer and Spray dryer
25	Drying of foods using freeze drying process
26	Preparation of Mango Leather
27	Preparation of Osmo-Dehydrated Food Products (Candied Fruits, Glazed Fruits)
28	Preparation of dehydrated raisins
29	Study of packaging, labelling and FSSAI Regulations of Dehydrated products
30	Industrial Visit(s) to different dehydration Units
31	Case study on fruits and vegetable drying