



Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
L	P	OJT		Theory		Tutorial/ Practical		
			University exams (ESE)	Progressive Assessment (PA)	External Practical /viva Exam(ESE)	Internal evaluation Practical /viva Exam(PA)		
0	0	15	15	0	0	100	100	200

L- Lectures; P- Practical; OJT- On Job Training; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	Introduction to Dehydration Technology Meaning and importance of food dehydration, Advantages of dehydration (shelf life, weight reduction, preservation), Applications: fruits, vegetables, spices, herbs, meat, dairy, Role and responsibilities of a Dehydration Technician, Overview of dehydration units and industries	10	8
2.	Raw Material Selection & Pre-Processing Selection of suitable raw materials, Quality parameters (ripeness, moisture content, defects), Washing, sorting, grading, Peeling, slicing, cutting techniques, Blanching (hot water, steam) – purpose and methods, Use of preservatives and anti-browning agents	15	10
3.	Types of Dehydration Methods Sun drying and solar drying, Tray drying, Tunnel drying, Spray drying (basic understanding) Freeze drying (overview), Comparison of different drying methods	15	10
4.	Dehydration Equipment & Tools Tray dryer: parts, working principle, Cabinet dryer and tunnel dryer, Temperature and humidity control systems, Fans, heaters, sensors, thermostats; Handling tools and safety devices, Preventive maintenance basics.	15	10
5	Drying Process Operations Loading and unloading procedures, Setting temperature and time parameters, Monitoring moisture loss, Uniform drying techniques, Avoiding over-drying and under-drying, Troubleshooting common drying issues.	20	15
6	Quality Control & Standards Moisture content testing, Texture, color, aroma evaluation, Defect identification (case hardening, discoloration, shrinkage), Food safety standards (FSSAI basics), Hygiene and sanitation practices, Record keeping and batch documentation	15	15
7	Post-Drying Operations Cooling methods Conditioning of dried products	15	10



	Grinding and powder preparation (if applicable) Sieving and grading Storage conditions (temperature, humidity).		
8	Packaging & Storage Packaging materials (plastic, laminated pouches, vacuum packs), Labeling requirements, Shelf life estimation, Storage warehouse practices, Transportation precautions.	15	9
9	Workplace Safety & Hygiene Personal protective equipment (PPE), Electrical and fire safety, Safe handling of machines, Cleaning and sanitation schedules, Waste management	10	8
10	Environmental & Energy Management Energy-efficient drying practices, Waste reduction, Water and power conservation, Use of renewable energy (solar dryers – basics).	10	5
	Total	150	100

Suggested Specification table with Marks (OJT):

Distribution of Theory Marks				
R Level	U Level	A Level	N Level	E Level
45	50	40	45	20

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate and above Levels (Bloom's Taxonomy)

References:

1. <https://www.ficsi.in/upload/model/curriculum>
2. <https://nsdcindia.org/fruits-and-vegetables-drying-dehydration-technician>
3. <https://www.cstaricalcutta.gov.in/>

