

7th Semester	RAG7D005	Food Plant Design & Management	L-T-P 3-0-0	3 Credits
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<https://www.edemsimulation.com/blog-and-news/blog/agricultural-machinery-design-bulk-material-simulation-can-accelerate-design-process-improve-machine-performance/>

https://www.youtube.com/watch?v=Do8DIRHq_7w

Module I (9 hr)

Food plant location, factors affecting plant location, selection criteria for plant location; Selection of processes, plant capacity, theories of plant location; Requirements of plant building and its components; Classification of food industries, Flow diagrams, selection of equipment.

Module II (9 hr)

Production process, Process and controls, process planning and process selection; Routing and scheduling; Inventory control and materials management, ABC analysis, Economic order quantity; Quality control and inspection, TQM, concepts of old and new quality; Control charts, interpretation of control charts, process capability analysis using control chart.

Module III (9 hr)

Objectives and principles of food plant layout, symptoms of poor plant layout; Factors affecting plant layout, types of plant layout, product or line layout, process or functional layout, combined layout; Salient features of processing plants for cereals, pulses, oilseeds; Salient features of processing plants for horticultural and vegetable crops; Salient features of processing plants for poultry, fish and meat products; Salient features of processing plants for milk and milk products.

Module IV (9 hr)

SWOT analysis and Indian food business scenario, generation, incubation and commercialization of ideas and innovations; New product development process, product life cycle; New product development strategies at different stages of product life cycle; Food Business Analysis and Strategic Planning; Project design and project formulation; Introduction to Financial management, Capital budgeting, capital budgeting techniques, Net present value, Internal rate of return.

Module V (9 hr)

Government schemes and incentive for promotion of entrepreneurship; Govt. policy on small and medium scale food processing enterprise; Export and import policies relevant to food processing sector; Export and import policies relevant to food processing sector; Cost analysis and preparation of feasibility report; Marketing management, marketing mix, product positioning; Food Product Marketing, market segmenting; Supply chain management for retail food products.

Books

1. RobbertsTheunis C. (2016). Food plant engineering systems by, CRC Press, Washington.

2. Maroulis Z B (2003). Food Process Design. Marcel Dekker, Inc ,Cimarron Road, Monticello, New York 12701, USA.
3. Hall, H.S. and Rosen, Y.S. (1976). Milk Plant Layout. FAO Publication, Rome.
4. López Antonio. Gómez. (2005). Food Plant Design.
5. Mahajan M. (1995). Operations Research. Dhanpat Rai and Company Private Limited, Delhi
6. Maroulis Z B and Saravacos G D. (2008). Food plant economics. Taylor and Francis, LLC
7. Antonio Lopez-Gomez and Gustavo V. Barbosa-Canovas.(2005). ISBN 9781138034488,CRC Press.

Digital Learning Resources:

<http://www.foodenginepos.com/productionmanagement>

<https://auditform.com/food-safety-management-software.php>

<https://www.agrimoon.com/wp-content/uploads/Food-Processing-Plant-Design-layout.pdf>