IV Year I - Semester	L	T	P	To	C
	3	1	-	4	4

AG405 Food Processing Plant Design and Layout

Course Description & Objectives:

To expose the students with the design features of different food processing equipments being used in the industries and with the layout, planning of different food and processing plants.

Course Outcomes:

The students will gain knowledge about:

1. *types of plan design and their constraints.*
2. *precautions and design criteria for processing plants of cereals, pulses*
3. *precautions and design criteria for processing plants of horticultural and vegetable crops*
4. *design requirements for processing plants pf milk and meat products*
5. *installation requirements of processing plants.*

Unit 1: Introduction to Plan Design:

Meaning and definition of plant layout. Objectives and principles of layout. Types of layouts.

Unit II: Salient features of processing plants:

Salient features of processing plants for cereals, pulses, oilseeds, horticultural and vegetable crops, poultry, fish and meat products, milk and milk products.

Unit III: Plant Layout:

Location selection criteria, selection of processes, plan capacity, project design, flow diagrams, selection of equipment, process and controls, handling equipment.

Unit IV: Plant Layout: Secondary Consideration:

Plant layout, plant elevation, requirement of plant building and its components, labour requirement.

Unit V: Plant Installation:

Plant installation, power and power transmission, sanitation, cost analysis, preparation of feasibility report.

TEXT BOOKS:

1. Apple, J M. (2000). Plant Layout and Material Handling, Wiley Eastern Pub.
2. Lalat Chander. (2005). Text Book of Dairy Plant layout and Design. ICAR, New Delhi.

REFERENCES:

1. Norman, G.M. (2003). Principles of food sanitations. Chapman & Hall Pub., New York.
2. Slade, S. (1990). Food Processing Plant (Vol. 1). Leonard Hill Books.
3. http://ecourses.iasri.res.in/e-Leaarningdownload3_new.aspx?Degree_Id=04