Course No.	Course Name	L-T-P - Credits	Year of Introduction
FT207	Introductory Food Technology	3-0-0 -3	2016

Prerequisite : Nil

Course Objectives

To introduce basic processes in food technology and regulatory bodies and various factors in food shelf life evaluation.

Syllabus

Food classification -Food process - Regulation bodies - Units and dimension - Water activity and shelf life - Packaging regulations

Expected outcome .

Student will get a brief idea of food technology and process happening in it.

Text Book:

1. P G Smith, *Introduction to Food Process Engineering,* 2011, Springer International Publishing
2. *Annual Report by Ministry of Food Processing, India*

Data Book (Approved for use in the examination):

References:

1. *Food processing Handbook* Ed. James G Brennan *2*006 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim
2. Zeki Berk ,*Food process engineering and technology,* 2013, ELSEVIER

Course Plan

Module	Contents	Hours	Sem. Exam Marks
I	**Food Classification:** Food definition; Categories; fruits and vegetables, dairy, cereals, pulses, oilseeds, fisheries, meat and poultry, consumer foods etc. nutrient composition, production, consumption, export, import etc. - statistics. Nutrients and vitamins in food. Major properties of food	7	15%
II	**Food Processing:** Need of Food processing, cause of deterioration, methods of preservation; ancient and modern methods. Primary, secondary, tertiary processing of them.. Different types of Food products; processed fruits, beverages, dairy, meat , fish, bakery confectionary, extruded products etc. brief explanation for types and method of preparation. Major microbes causing food spoilage Effect of temperature and other parameters on microbial action	7	15%
FIRST INTERNAL EXAMINATION			

III	**Food processing regulation bodies:** Status of food processing sector in India; different segments; fruits and vegetables, dairy, cereals, pulses, fisheries, meat and poultry, consumer foods etc. – Major challenges and growth potential. Infrastructure development and government policies in above sectors; food parks, packaging centres, VAC, FPO, MPEDA, FSSA, MPCO,MMPO etc. NMFP,FDI, MOFPI and KINFRA; their roles. Role of food technologist in society.	7	15%
IV	**Units and dimensions:** Basic units, derived units Definition of basic physical quantities; force, weight pressure, work, energy system, viscosity etc. Systems of measurement, Unit Conversion, precision, accuracy rounding off rule, significant digits, Dimensional Analysis; consistency.	7	15%
SECOND INTERNAL EXAMINATION			
V	**Water activity :** Shelf life of perishables, Water activity;concepts, Water – Role of water – Dietary requirements and sources – Important physical properties of water –Water binding in foods – water activity and activity of microorganisms –Controlling of water activity in foods – Experimental determination of water activity in foods. moisture content- wet basis, dry basis, determination,	7	20%
VI	**Packaging and regulations:** Food packaging; purpose of packaging, types of packaging, Environmental aspects , food safety, regulations, ISO, BIS, AGmark, FSSAI, GMP, HACCP Waste management in food processing.	7	20%
END SEMESTER EXAM			

QUESTION PAPER PATTERN

Max. marks: 100, Time: 3 hours

The question paper shall consist of three parts

Part A

4 questions uniformly covering modules I and II. Each question carries 10 marks

Students will have to answer any three questions out of 4 (3X10 marks =30 marks)

Part B

4 questions uniformly covering modules III and IV. Each question carries 10 marks

Students will have to answer any three questions out of 4 (3X10 marks =30 marks)

Part C

6 questions uniformly covering modules V and VI. Each question carries 10 marks

Students will have to answer any four questions out of 6 (4X10 marks =40 marks)

Note: In all parts, each question can have a maximum of four sub questions, if needed.