SEMESTER S6

FOOD QUALITY & SAFETY

Course Code	PEAGT633	CIE Marks	40
Teaching Hours/Week (L: T:P: R)	3:0:0:0	ESE Marks	60
Credits	3	Exam Hours	2 Hrs. 30 Min.
Prerequisites (if any)	None	Course Type	Theory

Course Objectives:

1. To familiarize the students, the concept of EIA and its development and need.
2. To provide an awareness about administrative and legal measures for the protection of environment and environmental clearance procedures in India.

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SYLLABUS

Module No.	Syllabus Description	Contact Hours
1	Food hygiene – introduction, definition, basic aspects of personal hygiene, disease transmission - food handling -preventing food borne illnesses, education of food handler in handling and serving food, importance of personal hygiene of the food handler, pest control - food institutions – sanitation of food institutions.	9
2	Food packaging – definition, functions, classification, laws related to packaging. Food labeling: standards, purpose, description types of labels, labeling regulation barcode, nutrition labeling – nutrition labeling, health claims, and mandatory labeling provision.	9
3	Food adulteration – definition of adulteration, adulterants, types of adulterants, food laws – essential commodities act, milk and milk products order, food standardisation and regulation agencies in India- agencies at state level, central food laboratories, HACCP, powers of food inspectors. Food spoilage -	9

	physical, chemical and microbiological spoilage of foods. Conduct a hazard analysis, CCP identification, establish critical limits for each CCP, establish CCP monitoring procedures, establish corrective actions procedures, establish procedures for HACCP verification and validation, documenting the HACCP Program.	
4	Introduction to food preservation- methods of preservation, general principles and applications of food preservation. Preservation by use of temperature - preservation by use of high and low temperature. Preservation by drying- preservation by drying and use of salt and sugar - enhancement of foods – food fortification, enrichment, supplementation, fermentation, germination, pre- and probiotics and organic foods.	**9**

Course Assessment Method
(CIE: 40 marks, ESE: 60 marks)

Continuous Internal Evaluation Marks (CIE):

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Attendance	Assignment/ Microproject	Internal Examination-1 (Written)	Internal Examination- 2 (Written)	Total
5	**15**	**10**	**10**	**40**

End Semester Examination Marks (ESE)

In Part A, all questions need to be answered and in Part B, each student can choose any one full question out of two questions

Part A	Part B	Total
• 2 Questions from each module. • Total of 8 Questions, each carrying 3 marks **(8x3 =24marks)**	• Each question carries 9 marks. • Two questions will be given from each module, out of which 1 question should be answered. • Each question can have a maximum of 3 sub divisions. **(4x9 = 36 marks)**	**60**

Course Outcomes (COs)

At the end of the course students should be able to:

Course Outcome		Bloom's Knowledge Level (KL)
CO1	Familiarize to apply protocol for safe food handling techniques, water and waste management	**K2**
CO2	Understand the role of food packaging and the importance of Nutrition labelling	**K1**
CO3	Analyse consequences of food poisoning and infection on the health of individuals	**K3**
CO4	Understand the basic principles food preservation methods	**K2**
CO5	Understand the procedure to implement HACCP program to any food industry	**K3**

Note*: K1- Remember, K2- Understand, K3- Apply, K4- Analyse, K5- Evaluate, K6- Create*

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CO-PO Mapping Table (Mapping of Course Outcomes to Program Outcomes)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	**3**		**2**	**1**								**2**
CO2	**3**	**2**	**2**	**1**	**1**		**1**					
CO3	**3**	**1**	**2**	**1**	**2**		**1**					**2**
CO4	**3**	**2**	**2**	**2**	**2**		**1**					
CO5	**3**		**1**				**1**					**2**

Note: *1: Slight (Low), 2: Moderate (Medium), 3: Substantial (High), -: No Correlation*

Text Books				
Sl. No	**Title of the Book**	**Name of the Author/s**	**Name of the Publisher**	**Edition and Year**
1	Food Additives, Characteristics, Detection and Estimation	Mahindra N. S,	APH Publishing Corporation, New Delhi	2008
2	Perspectives in Nutrition	Ward law G.M, Hamp J S	7th edition, Mc Graw Hill	2007
3	The Food Safety and Standards Act along with Rules and Regulations	Anonymous	Commercial Law Publishers (India) Pvt Ltd., Delhi	2011

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