هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

Course Specifications

Course Title:	**Meat and Fish Technology**
Course Code:	**2064204-3**
Program:	**Bachelor in Food Science and Nutrition**
Department:	**Food Sciences and Nutrition Department**
College:	**College of Science**
Institution:	**Taif University**

Table of Contents

A. Course Identification:

1. Credit hours:	**3 Hours**
2. Course type	
a.	University ☐ College ☐ Department ☑ Others ☐
b.	Required ☑ Elective ☐
3. Level/year at which this course is offered:	**10th Level / 4th year**
4. Pre-requisites for this course (if any)**:**	**Food Preservation (2063201-3)**
5. Co-requisites for this course (if any)**:**	**None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	√	100%
2	**Blended**		
3	**E-learning**		
4	**Correspondence**		
5	**Other (Practical)**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	30
2	**Laboratory/Studio**	30
3	**Tutorial**	---
4	**Others** (specify)	---
	Total	**60**

B. Course Objectives and Learning Outcomes

1. Course Description:

This course aims to provide students with concepts, terminology and definitions related to meat and seafood technology, and identify the chemical and histological structure of meat and some marine products and assess their quality. Explain the techniques of manufacturing meat and various seafood and local and international standards, manufacture some of these products and learn how to benefit remnants of meat and seafood processing.

2. Course Main Objective:

This course aims to study the scientific terms for meat and seafood technology-
Knowledge of composition and characteristics of meat, fish and poultry and their processing
analysis of the components of the meat muscles as well as the various technological steps for the manufacture and preservation of meat and fish products.

3. Course Learning Outcomes:

	CLOs	Aligned PLOs
1	**Knowledge and understanding**	
1.1	Recognize the slaughtering methods and its effects on the meat quality - the postmortem changes and factors affecting the meat palatability	**K3**

CLOs		Aligned PLOs
1.2	State different methods of preservation and storage of meat, poultry and fish, and their products - outline the factors affecting quality and spoilage of meat ،poultry and fish ،and their products.	K3
2	**Skills:**	
2.1	Evaluate the composition and properties meat, poultry and fish, and their products - the processed products of meat, poultry and fish for the validity or adulteration	S4
2.2	Implement some laboratory-processed meat, fish and poultry products and Judge the paneling and quality of laboratory-processed products compared to market ones.	S4
3	**Values:**	
3.1	Represent improvement of the learning skills and Demonstrate his own opinion during interactive learning in group	C1
3.2	Committed responsibility, respect and scientific ethics towards relationships during the work and Modify the working plan according to work conditions	C3

C. Course Content:

No	List of Topics	Contact Hours
1	The economic and Nutritional values of meat ،poultry, fish،, and their products.	3
2	Slaughterhouse and Slaughtering methods.	3
3	Postmortem changes in meat muscles.	3
4	Factors affecting meat palatability and sensory properties.	3
5	Meat preservation and storage	3
6	Poultry slaughter and processing.	3
7	poultry preservation and storage.	3
8	Meat products (cured, sausages, smoked meat, dried meat and canned meat	3
9	Chemical and physical properties of fish	3
10	Fish preservation and fish products (canned, smoked and dried).	3
Total		**30**
Practical Topics		
1	Laboratory instructions and biosafety	3
2	Study of the anatomical and microscopic characteristics of meat	3
3	Carcass record and jointing, wholesale and retail cuts, dressing percentage, yields, and meat grading.	3
4	Properties of meats (physical, chemical and microbiological)	3
5	Red meat tenderizing, cooking and organoleptic testing and paneling	3
6	Poultry: physical , chemical and microbiological properties, carcass jointing and cutting, dressing percentage and cooking and organoleptic testing and paneling	3
7	Fish: physical, chemical and microbiological properties, freshness, organoleptic quality features	3
8	Meat products (cured, sausages, smoked meat, dried meat and canned meat	3
9	Meat curing (dry and wet), processing of dried meat products (corned beef etc…) and Pastrami manufacture	3
10	Fish cooling, salting and canning	3
Total		**30**

D. Teaching and Assessment:

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Recognize the slaughtering methods and its effects on the meat quality - the postmortem changes and factors affecting the meat palatability	- Lecturer - Practical.	- Written, practical and oral exams
1.2	State different methods of preservation and storage of meat, poultry and fish, and their products - outline the factors affecting quality and spoilage of meat ،poultry and fish ،and their products.	- Lecturer - Educational - Videos - discussion	- Written, practical and oral exams
2.0	**Skills**		
2.1	Evaluate the composition and properties meat, poultry and fish, and their products - the processed products of meat, poultry and fish for the validity or adulteration	- Practical - Brain storming -	- practice and oral exams - Evaluation of assignments
2.2	Implement some laboratory-processed meat, fish and poultry products and Judge the paneling and quality of laboratory-processed products compared to market ones.	- Lecturer - Brain storming - Problem solving	- Written and oral exams - Discussion and opinion evaluation
3.0	**Values**		
3.1	Represent improvement of the learning skills and Demonstrate his own opinion during interactive learning in group	• Presentations- reports	Continues evaluation
3.2	Committed responsibility, respect and scientific ethics towards relationships during the work and Modify the working plan according to work conditions	• Group discussion	Evaluation the positive participation from students

2. Assessment Tasks for Students:

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignment and Interaction during lectures	Continues	10%
2	Midterm exam	5-6	20%
3	Weekly Lab. Reports	Continues	20%
4	Practical exam	11	10%
5	Final exam	12	40%
1	Assignment and Interaction during lectures	Continues	10%

*Assessment task **(i.e., written test, oral test, oral presentation, group project, essay, etc.)**

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

- Each faculty member is assigned a group of students for continuous academic advice for a period of six office hours weekly (6 hours/week).
- Staff are available for individual student consultations during this period.

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	- George M. Hall (2010): Fish Processing: Sustainability and New Opportunities. Wiley-Blackwell; 1st Edition. - Vikas Nanda (2014): Meat, Egg and Poultry Science & Technology. I K International Publishing House, India - Daniela Borda, Anca I. Nicolau, Peter Raspor (2017): Trends in Fish Processing Technologies; CRC Press, 1st Edition
Essential References Materials	- Vikas Nanda (2014): Meat, Egg and Poultry Science & Technology. I K International Publishing House, India. - Y. H. Hui and Wai-Kit Nip (2001): Meat Science and Applications; 1st edition, CRC Press.
Electronic Materials	- Wikipedia - Science Direct - Springer Open - Wiley - PubMed
Other Learning Materials	- Multi media / CD associated with the text books (when available)

2. Facilities Required:

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Lecture rooms with max 60 seats (must be equipped with data show facility). • Laboratory with max 30 seats (must be equipped with data show and all Lab. facility)
Technology Resources (AV, data show, Smart Board, software, etc.)	• Computer with smart board contain electronic card and thermal printer
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	• Provide the laboratory by different apparatuses and chemicals those necessary to the practical experiments

G. Course Quality Evaluation:

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching and assessment	Students, faculty, program leaders and Peer Reviewer	• Continuous monitoring by directors of program and quality assurance unit (Direct). • Applying Questionnaires received from the Deanship of Academic Development for Student evaluation (indirect). • Evaluation of course report (indirect).
Extent of achievement of course learning outcomes	Students, faculty, program leaders and Peer Reviewer	• Applying Questionnaires for Student evaluation (indirect). • Evaluation of course report (indirect).

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Quality of learning resources	Faculty, program leaders, administrative staff, independent reviewers.	• Continuous monitoring by directors of program and quality assurance unit (Direct). • Applying Questionnaires for Student evaluation (indirect). • Evaluation of course report (indirect).

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	**Department council - Academic Development Committee**
Reference No.	**Department council NO: 2 Subject NO: 1**
Date	**30 /02 /1444 H**