

Course Unit	Meat and Meat Products Technology	Field of study	Engineering and engineering trades
Bachelor in	Food Engineering	School	School of Agriculture
Academic Year	2023/2024	Year of study	3
Type	Semestral	Semester	1
Level	1-3	ECTS credits	6.0
Code	9087-641-3104-00-23		
Workload (hours)	162	Contact hours	T - TP - PL - TC - S - E - OT - O -

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Sandra Sofia Quinteiro Rodrigues

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. Recognise the different methods and procedures of meat industry;
2. Increase the interest in improving the use of protein from meat, through the proper use of various methods and procedures;
3. Develop expertise in all aspects of the industry production of meat and processed meat.

Prerequisites

Before the course unit the learner is expected to be able to:

1. Students should have knowledge of biology, biochemistry, microbiology of muscle and fat tissues
2. Have the knowledge of food technology and quality control and food safety.

Course contents

Slaughter procedure, carcass evaluation and classification. Carcass refrigeration Carcass quality: DFD and PSE. Rigor mortis, rigor and thawing of criochoque. Meat preservation. Processed meats (cured products and products processed by heat). Diagrams of manufacture.

Course contents (extended version)

1. Theory lessons World meat production. Importance and meat consumption
2. Fundamental unit of meat study. Carcass fabrication
3. Carcass quality. Color, pH and instrumental hardness
4. Muscle function and post-mortem changes. Rigor Mortis. Cold shortness. DFD and PSE meat
5. Meat preservation. Refrigeration and frozen. Dehydration. Irradiation. Chemical preservation
6. Cured meat and its procedures
7. Sausages classification
8. Practises Practice 1. Security rules and equipment at slaughter house. Techniques of use of knives
9. Practise 2. Slaughter procedures and carcass evaluation. Jointing procedures. Carcass dissection
10. Practise 3. Salting meta procedures
11. Practise 4. pH and aw evaluations
12. Practise 5. Sausage and pâté fabrication
13. Practise 6. Ham cure. Visit to a industrial unit
14. Practise 7. Clorure determination
15. Practise 8. TBARS determination

Recommended reading

1. Savell, J. W. and Smith, G. C. , 1998. Meat Science.
2. Warriss, P. D. , 2000. Meat science. An introductory text. CABI Publishing, Oxford, Reino Unido, 310 pp.
3. Swatland, H. J. , 2000. Meat cuts and muscle foods. Nottingham, University Press. Vários, 2005.
4. Vários, 2005. Estandarización de las metodologias para evaluar la calidad del producto (animal vivo, canal, carne y grasa) en los rumiantes. Monografía INIA: Série Ganadera, nº3.
5. Consulta online de bases de bibliografia como a sciencedirect, mdpi, entre outras

Teaching and learning methods

Expositive theoretical and application practical lessons. Lessons from the field, laboratory, films, slides, and study tours. Availability of working papers on e-learning platform. No presence in the hours, the students will perform a work of quality analysis of various food products. In the end, the student must produce a report.

Assessment methods

1. Continuous evaluation - (Regular, Student Worker) (Final)
 - Reports and Guides - 50%
 - Final Written Exam - 50% (Minimum grade 8)
2. Final evaluation - (Regular, Student Worker) (Final, Supplementary, Special)
 - Final Written Exam - 100%

Language of instruction

1. Portuguese
2. Portuguese, with additional English support for foreign students.

Electronic validation

Sandra Sofia Quinteiro Rodrigues	Álvaro Luís Pegado Lemos Mendonça	Elsa Cristina Dantas Ramalhosa	Ramiro Corujeira Valentim
22-01-2024	28-01-2024	30-01-2024	31-01-2024