

## Course Unit: 935027 - Meat and fish technology

Year 3 Semester 5 ISCED Code: 721 ECTS: 6.5

Type of Course Unit: Compulsory Delivery Mode: Face-to-face Language of Instruction: Portuguese

COURSE COORDINATOR: Silvina dos Anjos Pimenta Marques Maia Ferro Palma

### HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
162.5	30	15	45						72.5

Prerequisites (if applicable): Not applicable

### LEARNING OUTCOMES (knowledge, skills and competence)

(1) the student must know the meat and fish subsector in Portugal, highlighting the importance of quality control and traceability of meat and fish. (2) Being able to apply a verification procedure in meat and fish products, slaughter and fish industry, (3) and in processing and monitoring such products.

### CONTENTS

- 1-Meat and fish Subsector in Portugal.
- 2-Structure of consumption in Portugal and in European Union
- 3-Meat, histological structure, chemistry and biochemistry.
- 4-Muscle Transformation in meat, Rigor mortis. DFD and PSE Meat.
- 5- Main factors that determine Meat Quality.
- 6-General meat Microbiology and its adulterations and putrefaction.
- 7-General Technology of sausage products.
- 8-Fish, concepts of refrigeration and freezing.
- 9-Fish, biochemical processes of alteration, freshness index.
- 10- Canned fish

### DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

- Points 1 and 2 meet the 1st goal  
Points 3 to 6 respond to 2nd goal  
7 points and 10 give reply to 3rd goal

### TEACHING METHODOLOGIES

Lectures, laboratory practices, reports and visits to specialty industries, research papers.  
75% of practical lessons ensure the frequency practice syllabus

## **DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES**

Theoretical and practical lessons and visits to specialty industries, complete the different sections of the programme. In theoretical classes are exposed to the concepts, fundamentals, methods and standards to understand and apply in laboratory analysis in practical lessons.

## **EVALUATION METHODS**

The frequency of practical lessons when obtained is valid for 2 years.

Theoretical-practical examination for admission to the theory test

Midterm Quizzes or final quiz and Resource quiz.

Final grade = 50% Theoretical + 50% theoretical-practical

## **MAIN BIBLIOGRAPHY**

- Chebet, L., (2010) "Rapid" (alternative) methods for Evaluation of fish freshness and quality, Masters thesis, Masters of Science in Natural Resource Science - Fisheries Science, University of Akureyri, Faculty of Business and Science Department of Natural Resource Sciences
- Connel, J.J.; (1988) Control of fish Quality, Fishing News (Books) Ltd. Inglaterra
- Heinz G. and H.P., (2007) Meat Processing Technology, FAO, Bangkok.
- James S. J. and James C. (2000), Meat refrigeration; Cambridge Published by Wood head Publishing Limited, Abington, England
- Leo M. L. Nollet and Fidel Toldrá (2006) Advanced Technologies for Meat Processing; Edited by CRC Press Taylor & Francis Group, Broken Sound Parkway NW
- Price, D.F., (1994), The Science of Meat and Meat Products, Food e Nutrition Press, Inc. Westport, USA
- Sikorski, E.Z, (1994), Seafood: Resources, Nutritional Composition and Preservation
- Warris, P.D., (2003), Meat Science, CABI Pub. Wallingford UK

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