



Course Unit: **935032 – Sensory Analysis**

Year 3 Semester 6 ISCED Code: 721 ECTS: 5,0

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

COURSE COORDINATOR: Maria João Barata de Carvalho

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	
125	24		48						53

Prerequisites (if applicable): Not applicable.

LEARNING OUTCOMES (knowledge, skills and competence)

The skills to develop are :(1) Know the basic principles and applications of sensory evaluation of foods (SA) (2) Knowing which factors influence SA. (3) Learning the rules and techniques to select and train panelists. (4) Understand and apply the standards and methodologies to concept sensory sheets, and design the appropriate locations for AS (5) Know the procedures to perform discriminatory, descriptive and hedonic analysis. (6) Apply the rules and statistical methods to SA results. (7) Identify and interpret the results obtained in SA and its correlation with the instrumental analysis.

CONTENTS

Lectures

1. Concepts, application fields and importance of Sensory Analysis of Food (SA)
2. Factors affecting SA
 2. 1. Panelists selection and training
 2. 2. Sensory room and its environmental conditions
 2. 3. Samples preparation
3. Senses involved in SA
4. Sensory tests used in SA
 4. 1. Discriminatory tests
 4. 2. Descriptive tests
 4. 3. Affective tests
5. Methods of instrumental analysis
 5. 1. Electronic Nose, GC and HPLC
 5. 3. Colorimeters, UV and Rheology (viscometers and texturometers)
6. Statistics applied to SA

Practices

1. Assessors selection and training to for panel.
2. Preparation of sensory sheets

3. Room design, sample preparation conditions for food sensory evaluation
4. Implementation of sensory analysis and its results analysis
5. Physical chemical and instrumental analysis implementation (colorimetry, GC, UV, rheology).
6. Data collection, statistical analysis and results interpretation

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

This course program consists in two components of matter - theoretical and practical - that are interconnected, since in theory classes are exposed the concepts, fundamentals, methods and standards to understand and apply sensory analysis to food. In the practical classes students begin a process to prepare a trained panel to apply the fundamentals issues and thrash out the methodologies used in assessors selection and training, to prepare procedures and sample submission, to concept sensory sheets by collecting evidence and different glossary, and also to process data. To provide students with the knowledge of sensory analysis as an effective and objective tool. It also assurance to the students the practical aspects used in sensorial analysis for food products characterization, certification and preference or acceptance by consumers. Therefore, it is clear the overall coherence of this course program with its objectives.

TEACHING METHODOLOGIES

Teaching methodology includes a set of lectures, fundamental to understanding the basic knowledge in the different techniques and applications of food sensory evaluation, with a focus on lectures and interactive audio-visual equipment. In these classes will be presented case studies that apply the teachings of this course. In practical classes students under teacher supervision, carry out the selection and training of a taste panel to evaluate a determine product and will submit a written and oral work with samples that were submitted to sensory and rheological analysis, and also will do a bibliographic review. The week workload is 2 theoretical hours and 2 practical hours.

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

This course aim is to prepare students to foods sensory analysis thematic (SA). Students know how to outline the evidence (tests, worksheets, judges, location, samples) and statistically analyze the results of the main tests used in foods sensory analysis: analytical, discriminatory, descriptive and affective tests, correctly using the location. Perform assessor's selection and training, samples preparation and its sensory tests, with registration, analysis and results interpretation. Students will be able to interpret and analyze foods sensory attributes, the characteristics of sensory response and the techniques of foods sensory evaluation, with effective control of the techniques that able them to develop, train and operate panels of sensory analysis for any food and collect, analyze and take the results

EVALUATION METHODS

The final classification results of the evaluation work is carried out in practical classes for admission to final quiz and will have 50% on the final grade, and the remaining 50% is a result of an assessment writing quiz.

MAIN BIBLIOGRAPHY

- ISO 5492 (1992) Sensory analysis. Vocabulary. International Organization of Standardization. Genève.
- ISO 8586-1 (1993). Sensory analysis - General guidance for the selection, training and monitoring of assessors.
- ISO 8589 (1988) Sensory analysis -- General guidance for the design of test rooms, International Organization of Standardization. Genève;
- Jackson RS (2009) Wine Tasting: A Professional Handbook, 2^ª Ed. Academic Press, San Diego, California, USA.
- Lawless H.T., Heymann H (2010) Sensory Evaluation of Food. Principles and Practices. Second Edition. Springer. New York.
- Meilgaard MC, Carr BT & Civille GV (2006) Sensory Evaluation Techniques, Fourth Edition, CRC Press.
- Stone H, Bleibaum RN & Thomas HA (2012) Sensory Evaluation Practices. Fourth Edition. Elsevier Inc.