

## 68755 - Sensory analysis of foods

### Syllabus Information

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**Academic year:** 2023/24

**Subject:** 68755 - Sensory analysis of foods

**Faculty / School:** 105 - Facultad de Veterinaria

**Degree:** 631 - Master's Degree in Food Quality, Safety and Technology

**ECTS:** 3.0

**Year:** 1

**Semester:** First semester

**Subject type:** Optional

**Module:**

### 1. General information

This subject, like most in the Master's program, is eminently practical in nature. Theoretical sessions explain the fundamentals of the main techniques of sensory analysis and sensometrics, and also provide students with a lot of material, digital resources and references in different formats (software, gamification resources, diagrams, tables, figures and annexes with real case studies of their application to the food industry and to research and development projects). In the practical sessions the students carry out the actual simulation of the different phases of these techniques, putting sensometrics into practice. Students must conduct a case study and its presentation in a seminar, in order to demonstrate that they are able to carry out a sensory evaluation of the organoleptic properties of foods, statistically analyse the data obtained and adequately and effectively transfer the results obtained, highlighting their contribution and relevance. These approaches and objectives are aligned with the Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), so that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement. These objectives are: Goal 1 (Zero hunger) Goal 4 (Quality education), Goal 9 (Industry, innovation and infrastructure) and Goal 12 (Responsible production and consumption).

This subject fits perfectly within the framework of the degree. Sensory analysis and sensometrics are essential scientific-technological areas in any kind of research in the field of Food Science and Technology. Sensory analysis and sensometrics are necessary to assess the quality of raw materials, formulations, manufacturing processes, products and preservation treatments, both for the development of new products, and also as a complement to market analysis, marketing and promotional campaigns. Thus, they constitute a basic pillar of research in the food field. It should be noted that a basic knowledge of general statistics is recommended but not compulsory.

### 2. Learning results

To design, plan, perform and interpret the most appropriate food sensory analysis techniques for the requirements of the food industry or for a research and development project, as well as to communicate the characteristics and results of the analysis.

### 3. Syllabus

The program offers the students help to achieve the expected results and comprises the following sessions: Theoretical sessions. 10 h (1 h sessions) face-to-face. The topics covered are:

1. Introduction: Utility of sensory analysis and general fundamentals. Best practices.
2. Conditions and physiological notions for sensory analysis. 1.3. Experimental design and statistical analysis.
3. General training of sensory evaluators
4. Specific training of sensory evaluators
5. Sensory analysis techniques: discriminatory, sorting, descriptive (Qualitative and Quantitative -QDA-), affective (hedonic and preference). Time-intensity and consumer study.
6. Pre-selection and selection of candidates for a panel of trained tasters.
7. Development of general and specific profiles (*Free choice*, *Flash profile* and *Mapping*).
8. Affective Sensory Analysis (Hedonic, Preference and Penalty Analysis -JAR-)
9. Consumer analysis: Qualitative (*focus group*) and quantitative (multivariate) techniques.
10. Practical sessions: 16 hours on-site. These practical classes are organized in sessions of 2 and 3 hours. Practical work in tasting rooms and meeting on the contents previously seen in the theory.

#### 4. Academic activities

The program offers the students help to achieve the expected results and comprises the following activities:

- Theoretical sessions. 10 h (1 h sessions) face-to-face.
- Practical sessions: 16 hours (2 and 3 hours). Practical work in the tasting rooms and meetings on the contents previously seen in the theoretical sessions. Individual work (case study): monographic on a real or fictitious topic related to the design, planning, conduction and interpretation of sensory analysis of a food for a food industry company or a research project. 45 hours of non-attendance. Presentation of the work in a seminar and discussion with teachers and classmates. The presentation time will be 10 min, plus 5 min for defence and discussion. 4 and 6 h.

#### 5. Assessment system

The student should demonstrate that they has achieved the expected learning results by being able to design, plan, conduct and interpret the most appropriate food sensory analysis techniques for the requirements of the food industry or a research and development project, as well as to communicate the characteristics and results of the analysis. Requirements for the above are:

**Continuous assessment:** Continuous assessment of the student's participation and contribution to the development in all practical sessions. In particular, and in addition to the above, the skill and creativity in the development of these practical sessions will be assessed. The critical capacity demonstrated by the student in the seminars for the presentation of case studies will also be assessed. This assessment method equals to 30% of the final grade. Assessment of a monographic work on a real or fictitious case study, chosen by the student, including the design, planning, conduction and interpretation of the results, related to the sensory analysis of food in the context of the needs of a food industry company or a research and development project. The work must be presented in a seminar, for 15 min, and will be defended and discussed with the teacher(s) of the subject and all the students for 5 more minutes. In accordance with the learning results' objectives, the student's ability to design, plan, conduct and interpret the most appropriate food sensory analysis techniques for the requirements of the food industry or a research and development project will be assessed. This assessment method equals to 70% of the final grade.

**Global test:** Students who have not chosen the continuous assessment may be evaluated by means of a global test that will consist of the same evaluation activities that those for the continuous assessment. The grading percentages for each activity and the assessment criteria will be the same for the global test and for the continuous assessment.

The final grade includes the assessment of the work presented (70%) and the degree of participation and achievement throughout the subject's sessions (20%) and seminars (10%).