

**COURSE DATA****Data Subject**

Code	36390
Name	Applied cooking techniques
Cycle	Grade
ECTS Credits	6.0
Academic year	2019 - 2020

Study (s)

Degree	Center	Acad. year	Period
1212 - Degree in Gastronomic Sciences	Faculty of Pharmacy and Food Sciences	4	First term

Subject-matter

Degree	Subject-matter	Character
1212 - Degree in Gastronomic Sciences	30 - Técnicas de cocina aplicadas	Optional

Coordination

Name	Department
JIMENEZ HERNANDEZ, NURIA	265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med.
SOLER QUILES, CARLA MARIA	265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med.

SUMMARY

The subject of Applied Cooking Techniques is an optional subject taught during first semester in the fourth year of the degree in Gastronomic Sciences of the Universitat de València. This subject has a total of six credits, divided between theory and other activities.

This subject intend to study the different phenomena that occur in food during their culinary treatment, as well as the effect these treatments have on the main components of these foods such as carbohydrates, lipids and proteins. The application of this knowledge will allow students to carry out basic elaborations of multiple applications, understanding the role of each ingredient.

It will also explain the repercussions of culinary treatments on other components such as pigments and aromatic substances, which will determine the final organoleptic characteristics that will influence the diner.

All these concepts could be applied in the design and assembly of dishes, both traditional and avant-garde.



PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

No entry requirements

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

Learn the effect of the culinary techniques on cereals, vegetables, legumes, meat, fish and seafood.

DESCRIPTION OF CONTENTS

1. Food Components

Water. Carbohydrates. Lipids. Proteins.

2. Water

Physical constants. Water and pure ice structure. Water-solutes interactions. Water activity and food alteration.

3. Carbohydrates

Starch and modified starch. Dietary fibre.

4. Browning in foods

Classification. Caramelisation and ascorbic acid degradation. Maillard reaction.

5. Lipids

Physical properties of fatty acid and fats. Lipid oxidation and antioxidants. Frying process. Modifications of fats and oils. Functional properties of lipids.

**6. Proteins**

Functional properties. Texturizers

7. Enzymes

Enzymatic browning.

8. Pigments

Modification of pigments during food processing

9. Aromatic compounds

Impact compounds. Off-flavors. Aroma compounds generated in cooking process.

WORKLOAD

ACTIVITY	Hours	% To be attended
Laboratory practices	45,00	100
Theory classes	15,00	100
Study and independent work	90,00	0
TOTAL	150,00	

TEACHING METHODOLOGY

The theoretical teaching methodology will be based on the delivery of lectures along with the possible performance, presentation and defence of individual and collective reports. Classes are taught using audio-visual technical equipment. The student will have this material in the virtual classroom. Visits to centres of interest for the subject will be scheduled. To make the most of the experience, a previous study of the company will be asked, whenever possible, and the professor will address the doubts. At the end of the visit, a report will be delivered to the teacher.

EVALUATION

Written test to ensure knowledge and understanding of established theoretical minimum content for the subject (60%).

Continuous evaluation with the possible implementation, presentation and defense of individual and group reports on topics related to the contents explained and discussed in the classroom during the theoretical classes. The level of understanding of content and skills to their exposure, advocacy and discussion will be appreciated, when it will be possible (10%)

Assessment of visits by monitoring the work with detailed and organized reports, in addition to the possibility of holding exams(30%)



It is necessary to acquire 5 out of 10 points in the written test to pass the subject. Attendance at visits is mandatory to pass the subject.

ADDENDUM COVID-19

This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council

English version is not available