

Academic Year/course: 2022/23

30842 - Undergraduate Dissertation

Syllabus Information

Academic Year: 2022/23

Subject: 30842 - Undergraduate Dissertation

Faculty / School: 105 - Facultad de Veterinaria

Degree: 568 - Degree in Food Science and Technology

ECTS: 6.0

Year: 4

Semester: Second semester

Subject Type: End of Grade Dissertation

Module:

1. General information

1.1. Aims of the course

The subject and its expected results respond to the following approaches and objectives:

Through the Final Degree Project, students test the skills acquired in the previous subjects. They also acquire experience and security to achieve their insertion in the labor market as successful professionals in the areas of: "Quality Control of food products?", "Food Processing", "Food Safety", "Development and innovation of processes and products", "Legal, scientific and technical advice" and "Teaching and Research in Food Science and Technology".

This subject constitutes an integrative training activity. Its objective is to encourage students to complement and to apply in an autonomous way, the knowledge acquired in their previous academic training. The work will be carried out in accordance with the different modalities established by the Regulations of Final Degree Projects of the University of Zaragoza and that are included in section 4.3 of "Program" of this guide. As far as possible, the development of projects in collaboration with companies, in the context of university internships, research contracts, etc., will be encouraged, so that the experience gained through the development of the TFG be as realistic as possible. In this way, it is intended to promote the acquisition of skills that prepare students for the professional activity and promote their capacity for entrepreneurship, creativity, teamwork and leadership.

Consequently, with the realization of the TFG it is intended to achieve the following objectives:

- a) To contribute to the integral formation of students complementing their theoretical and practical learning.
- b) To know the work methodology appropriate to the professional reality in which students will have to work, contrasting and applying the knowledge acquired.
- c) To promote the development of technical, methodological, personal and participatory skills.
- d) To obtain an experience that facilitates insertion in the labor market and improves their future employability.
- e) To promote the values of innovation, creativity and entrepreneurship.

These approaches and objectives are in line with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the learning outcomes of the subject provides training and competence to contribute to some extent to its achievement:

Goal 4: Quality education.

4.7. By 2030, ensure that all learners acquire the theoretical and practical knowledge necessary to promote sustainable development, including through education for sustainable development and sustainable lifestyles, human rights, gender equality, the promotion of a culture of peace and non-violence, global citizenship and the appreciation of cultural diversity and the contribution of culture to sustainable development, the appreciation of cultural diversity and the contribution of culture to sustainable development.

1.2. Context and importance of this course in the degree

Passing this subject lets obtaining the Graduate Degree in Food Science and Technology. Therefore, it provides an opportunity of evaluating the acquisition by students of the main competences of the degree. Being the last subject to be addressed, it allows the student to put into practice the acquisition of a large part of the transversal competences worked during the degree and integrate the knowledge and technical skills acquired to solve different problems in the food field. In particular, it allows students to apply the knowledge acquired, to promote collaboration, leadership, creativity, innovation, entrepreneurial character and teamwork.

1.3. Recommendations to take this course

This guide aims to collect different issues related to the description of the work that students must perform to achieve the overcoming of this subject, while complying with the requirements established in the regulations of both, the University of Zaragoza and the Veterinary Faculty (<https://veterinaria.unizar.es/academico/trabajo-fin-de-grado-grado-cta>), as well as the agreements of the Commission for Quality Assurance of the Degree of Food Science and Technology.

It is recommended to register for this subject together with the rest of the subjects that make up the fourth year. This subject should be taken after passing the subjects of the previous courses. It is also recommended to attend the meetings that will be scheduled during the first semester in which the corresponding works and tutors will be assigned. It is also recommended to consult the resource **?GUÍA DE HERRAMIENTAS Y PAUTAS PARA UN BUEN TFG: Curso online a través del Campus Virtual de la UZ?**. This tutorial aims to be a guide that provides information and indications to the students of the University of Zaragoza on the characteristics and development of the Final Degree Project (TFG). It remains open throughout the academic year and has a permanent consulting service attended by librarians from the University of Zaragoza.

Contents of the course:

- Step 1. Knowing the regulations related to the Final Degree Project.
- Step 2. Choosing the topic
- Step 3. Choosing your bibliographic reference manager.
- Step 4. Planning and searching for information
- Step 5. Evaluating the information found
- Step 6. Using the information ethically
- Step 7. Writing the paper
- Step 8. Once the work is finished... (upload it to the repository, copyright, etc.)

How to enroll in the course:

If you are enrolled in the subject Final Degree Project, registration is automatic

If you are not enrolled in the subject Final Degree Project, please contact the library of your center:
<http://biblioteca.unizar.es/conocenos/directorio-buz>

2. Learning goals

2.1. Competences

By passing the subject, the student will be more competent to ...

CG1 - Manage information, search for sources, information gathering and analysis, etc.

GC2 - Use ICTs

CG3 - Teamwork

CG4 - Think and reason critically

CG5 - Work autonomously and carry out a self-assessment

CG6 - Respect the diversity and plurality of ideas, people and situations

CG7 - Transmit information, orally and in writing, both in Spanish and in English

CG8 - Show environmental sensitivity, assuming an ethical commitment

CG9 - Negotiate both with specialists in the area and with people who are not experts in the field

CG10 - Adapt to new situations and solve problems

CG11 - Undertake and be motivated by quality

CB1 - That students have demonstrated to possess and understand knowledge in an area of study that starts from the base of general secondary education, and is usually found at a level that, although supported by advanced textbooks, also includes some aspects involving knowledge from the forefront of their field of study

CB2 - That students know how to apply their knowledge to their work or vocation in a professional way and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study

CB3 - That students have the ability to gather and interpret relevant data (normally within their area of study) to make judgments that include a reflection on relevant issues of a social, scientific or ethical nature

CB4 - That students can transmit information, ideas, problems and solutions to both a specialized and non-specialized audience

CB5 - That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy

CE1 - Define the elements of a strategic plan and a quality control system and plan its implementation in the food industry,

including purchasing policies and cost calculation.

CE2 - Perform physical, chemical, microbiological and sensory analyzes of raw materials and food and interpret the results obtained

CE3 - Identify the physical, chemical and microbiological agents that cause food spoilage and select the most appropriate strategies for their prevention and control

CE4 - Identify and assess the physical-chemical, sensory and nutritional characteristics of foods, their influence on processing and the quality of the final product

CE5 - Prepare, transform and preserve food considering quality and safety standards, integrating environmental management

CE6 - Identify the danger agents in the phases of the food chain, assess the risk and design prevention and control systems.

CE7 - Apply the basic tools of food safety management.

CE8 - Design, apply and maintain self-control protocols, internal audits and traceability systems in the food industry.

CE9 - Formulate new foods choosing the most appropriate ingredients and additives as well as the treatments to obtain safe, nutritious and attractive products for the consumer.

CE10 - Design and validate new manufacturing processes to meet market needs and demands.

CE11 - Advise on the interpretation and application of food legislation, reports and administrative files.

CE12 - Scientific and technical advice to the food industry.

CE13 - Communicate knowledge in food science and technology, using the fundamental concepts, methods and tools of this discipline.

CE14 - Design and carry out research in the food field: Compilation and analysis of information, hypothesis formulation, experimental design, interpretation of results and drawing of conclusion.

2.2. Learning goals

The student, to pass this subject, must demonstrate the following results...

Is able to carry out, a final degree project, consisting of the realization of an academic, laboratory or field work, of such complexity and scope, that it allows to prove the acquisition of the competences of the degree and that his work capacity is at the level required of a professional capable of integrating into the labor market, in the food field.

2.3. Importance of learning goals

The importance of the subject and the relevance of its results is maximum, since it supposes the global proof of the whole of the work carried out by the student throughout the different courses and subjects.

3. Assessment (1st and 2nd call)

3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

The student must demonstrate to achieve the intended learning outcomes through the following assessment activities:

The student must develop a written work in accordance with the established requirements that in addition must be exposed, relying on the elements that he deems appropriate, before a Tribunal constituted according to the rules and requirements established by the University of Zaragoza and the Faculty of Veterinary Medicine. Students will present a report, duly bound, in accordance with the different modalities established by the Regulations of Final Degree Projects of the University of Zaragoza:

The Report must have a maximum length of 35 pages (excluding index cover and annexes), using Calibri 11 font and a line spacing of 1.5. Justified alignment and margins in normal format.

The Defense will consist of the presentation of the FDP for a maximum of 15 minutes, and the subsequent period of discussion with the court will be extended for a maximum of 15 minutes. This test will be evaluated following the criteria specified in the Evaluation criteria section. The Report will represent 45% of the overall grade; the Defense of labor, taking into account both the presentation, as the discussion with the court 35% and finally the report of the Director 20% of the final grade. To pass this test it will be necessary to obtain a minimum grade of 5.

Evaluation criteria and levels of demand

The Report that the student will present in writing must include the following aspects:

1. Cover: In established format. It will include title of the FDP in Spanish and English, name of the student and the director(s)
2. Index
3. Abstract: in Spanish and English (maximum of 300 words).
4. Introduction (including literature review).
5. Justification and Objectives
6. Methodology

7. Results and discussion *

8. Conclusions (in Spanish and English).

9. Personal assessment. Identification of the contributions that, in terms of learning, have meant the realization of this subject.

10. Bibliography. Citations and references will be formatted in Harvard BUZ style (http://biblioteca.unizar.es/sites/biblioteca.unizar.es/files/documentos/estilo_harvard_resumen_buz_con_rrss.pdf)

11. Annexes (only if necessary)

* In those works of bibliographic review modality, the results are the review carried out.

Grounds for exclusion.

Failure to comply with one or more of the following criteria will result in the Report not being deposited:

- Deposit of the Report or the Proposal outside the delivery period established by the Faculty
- Title Center of the Report other than that indicated in the proposal of FDP
- Extension higher than established
- That the summary and conclusions are not in both, Spanish and English

The Defense must include the main aspects of the TFG. In all these chapters will be valued, among others:

- The correction in the use of the Spanish and English language
- The clarity, conciseness and order
- The capacity of synthesis
- The innovative character
- The creativity
- The capacity of autonomous learning
- The capacity of analysis, understanding and interpretation of the bibliography, of the material and methods and the results obtained
- The formal aspects related to the presentation of the data, memory, presentation and defence.

For the assessment of the aforementioned capacities, the Faculty of Veterinary Medicine makes available to the evaluation board a system of rubrics that can be found on the website of the center (<https://veterinaria.unizar.es/academico/trabajo-fin-de-grado-grado-cta>)

Qualification system: in accordance with the Regulation of Learning Evaluation Standards of the University of Zaragoza (Governing Council Agreement of December 22, 2010), the results obtained by the student will be graded according to the following numerical scale from 0 to 10, with expression of one decimal, to which its corresponding qualitative qualification may be added:

0-4.9: Failed.

5.0-6.9: Approved.

7.0-8.9: Notable

9.0-10: Outstanding

The mention of "Matrícula de Honor" will be awarded among students who have obtained a grade higher than 9.0. For this subject there is no limitation in the granting of the Honorable Mention.

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The learning process that has been designed for this subject is based on the following:

The student must agree with his/her Director(s) of the TFG the formative activities, depending on the proposed topic and chosen modality (see Evaluation section).

The work carried out should be recorded in a report as described in the section Evaluation that must be submitted and defended publicly before a court in two of the four defense periods authorized for that purpose.

Students must follow the regulations described in:

- Prevention: A guide for students at the University of Zaragoza:
https://uprl.unizar.es/sites/uprl.unizar.es/files/archivos/Procedimientos/guia_preventiva_para_estudiantes.pdf
- Manual de seguridad en los laboratorios de la Universidad de Zaragoza y normas marcadas por la Unidad de Prevención de Riesgos Laborales:

https://uprl.unizar.es/sites/uprl.unizar.es/files/archivos/Procedimientos/manual_de_seguridad_en_los_laboratorios_de_la

<https://uprl.unizar.es/inicio/manual-de-procedimientos>

In addition, students will follow as well any instructions related to biosecurity given by the professor

4.2. Learning tasks

The program offered to the student to help him achieve the expected results includes the following activities:

6 ECTS has been assigned in the curriculum to this subject, which means that the student will have to dedicate 150 hours to pass it, which will be distributed among the following tasks:

- Meetings of students with the Programme Coordinator
- Meetings of each student with his/her Director(s)
- The student's personal work
- Exposition and defense of work before the court

In case that the evaluation of the final degree project (FDP) by the ethical committee of animal welfare is required, the following steps must be followed:

1st Definition of the FDP at an ethical level. The works are divided into 4 categories:

- Category 1: dead vertebrate animals or samples from vertebrate animals not expressly euthanized will be used to carry out the final degree project.
- Category 2: vertebrate animals euthanized specifically to carry out the FDP.
- Category 3: the FDP uses samples obtained from living vertebrate animals, and samples collected that does not necessarily imply the euthanasia of the animal. After obtaining the sample (s), the animal is not subjected to any other manipulation.
- Category 4: live animals are used during the FDP. Anesthetized animals are also included.

2nd. The request is made by the DIRECTOR of the FDP. The application forms can be downloaded here, in the teaching practice evaluation section: <http://cea.unizar.es/solicitud.html?menu=procedimientos&menu=procedimientos>

3th. Once the form has been completed, the signed copy must be sent to:

Ethical Advisory Commission for Animal Experimentation. UPS building. Campus Plaza San Francisco. C / Pedro Cerbuna, 12. 50009-Zaragoza Phone: 976762847 cea@unizar.es

4th. If you already have a previous report from UNIZAR, another University or another Research Center, it is not necessary to request it again. The official number assigned to that procedure must be indicated.

4.3. Syllabus

This is an integrating subject of the knowledge and competences developed throughout the degree. Student will develop his/her TFG in a specific line:

- a) Specific academic works, such as bibliography reviews.
- b) Specific works carried out in laboratory, field, Veterinary Hospital, Pilot Plant or other facilities that allow the student to develop their activities or acquire their skills.
- c) Specific works carried out as a result of internships in companies or institutions, or within the framework of the Practicum subjects of the degrees of the Faculty of Veterinary Medicine.
- c) Equivalent works carried out as a result of a stay at another University, through an agreement or mobility program.

4.4. Course planning and calendar

The dates and key milestones of the subject will be described in detail, along with the rest of the fourth year subjects in the Degree of CTA, on the website of the Faculty of Veterinary Medicine (<https://veterinaria.unizar.es/academico/trabajo-fin-de-grado-grado-cta>). This link will be updated at the beginning of each academic year.

4.5. Bibliography and recommended resources

It will be the student him/herself who should seek it, guided by his/her Director (s) and according to the type and theme of the chosen modality.