

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

<b>Code</b>	43235
<b>Name</b>	Master's final project
<b>Cycle</b>	Master's degree
<b>ECTS Credits</b>	12.0
<b>Academic year</b>	2021 - 2022

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
2148 - M.D. in Biodiversity: Conservation and Evolution	Faculty of Biological Sciences	1	Annual

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
2148 - M.D. in Biodiversity: Conservation and Evolution	1 - Master's final project	End Labour Studies

**Coordination**

<b>Name</b>	<b>Department</b>
FERNANDEZ MARTINEZ, MARIA MERCEDES	355 - Zoology
LLUCH TARAZONA, JAVIER	355 - Zoology

**SUMMARY**

Master's Thesis is a compulsory subject of 12 ECTS. The Master's thesis will consist of an original research project, under the supervision of a tutor, in which the knowledge and skills acquired by the student throughout the degree will be demonstrated. This work will constitute an autonomous and personal task for the student.

**PREVIOUS KNOWLEDGE**



### **Relationship to other subjects of the same degree**

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

### **Other requirements**

It is advisable to have previously completed the other subjects of the master's degree.

## **OUTCOMES**

### **2148 - M.D. in Biodiversity: Conservation and Evolution**

- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Be able to access the information required (databases, scientific articles, etc.) and to interpret and use it sensibly.
- Be able to access to information tools in other areas of knowledge and use them properly.
- To be able to assess the need to complete the scientific, historical, language, informatics, literature, ethics, social and human background in general, attending conferences, courses or doing complementary activities, self-assessing the contribution of these activities towards a comprehensive development.
- To prepare a clear and concise memory of the results of your work and the conclusions obtained.
- Be able to apply the research experience acquired to professional practice both in private companies and in public organisations.
- Stimulate the capacity for critical reasoning and for argumentation based on rational criteria.
- Encourage ethical commitment and environmental awareness.
- Be able to communicate and disseminate scientific ideas.
- Conduct studies related to the analysis and preservation of biodiversity.
- Present and defend the formulation, results and conclusions of a study in public.

## **LEARNING OUTCOMES**



After completing the Master's Thesis, the student will be able to design, plan, develop and defend an original research project on any aspect related to the study and conservation of biodiversity. Ideally, this study should be able to be published in an impact journal.

## DESCRIPTION OF CONTENTS

### 1. STRUCTURE (I)

The Master's thesis (FMT) must contain the results of an original, individual research project in the field of biodiversity and conservation, including the context of the problem, clear objectives, the materials and methods used, the specific results, a reasonably well-considered discussion, and conclusions in which the fundamental contribution of the study is concisely described.

Depending on the type of research, this structure can be adapted to other formats (e.g. in taxonomic descriptions, meta-analyses, etc.), as long as the context, objectives, materials and methods are clearly defined, and the results and their interpretation are clearly delimited.

There is no limit to the length of the dissertation; what is important is the quality of what is presented and, therefore, it is up to the student and his/her tutor(s) to determine the appropriate length.

### 2. STRUCTURE (II)

- a) Title page. It must contain: Seal of the Universitat de València, name of the master's degree, title of the project, author, tutor (if there is an external tutor and an academic tutor, both must be stated), month and year of submission.
- b) Abstract (up to 300 words) in English (Abstract"), and Spanish or Valencian, on the first page. The abstract must be sufficiently informative regarding the results and conclusions reached.
- c) Keywords (up to 6) in English, on the first page, immediately after the abstract.
- d) Table of contents. It should appear on the second page.
- e) Introduction. This should describe, in sufficient detail, the background and problems that justify the objectives. As many sections as necessary may be used. If appropriate, it is recommended that the target species be described in a section of the introduction. It can also be done as a Materials and Methods section if this helps the structure to be more fluid.
- f) Objectives. These should be included in a separate section.
- g) Materials and Methods. Sufficient detail should be given so that anyone wishing to repeat the study could do so.
- h) Results. They should be concise, avoiding incorporating elements of discussion.
- i) Discussion. All results presented should be discussed in a concise manner, avoiding unnecessary speculation.
- j) In the event that the separation of Results and Discussion is very complicated, they can be presented in a single section (Results and Discussion) respecting, in any case, the presentation of the results of their interpretation.
- k) Conclusions. They should describe, concisely, the fundamental contribution of the study.
- l) Acknowledgements.



m) References. Any of the formats usually used in scientific publications may be chosen, but the references must be complete and coherent.

n) Appendices (optional). If additional information needs to be included, this can be done at the end of the work, numbering them.

### 3. FORMAL AND STYLISTIC CRITERIA

1. The document must have margins of 2.5 (top and bottom) and 3 (left and right). The text should be in Times 12 font (or equivalent) with 1.5-line spacing and properly justified.

2. Where statements and data have been taken from other authors, this should be clearly specified. The use of any source that is not properly explained -and, in particular, the practice of plagiarism- will necessarily invalidate the work.

3. Figures. They must be numbered sequentially. Each figure should have its own caption, which should be self-explanatory. Figures should appear in the text as close as possible to where they are mentioned, and should be referenced in the text. The source of all figures that are not their own should be mentioned.

4. Tables. Tables should be numbered sequentially. Each table should have its own heading, which should be self-explanatory. Tables should appear in the text as close as possible to where they are mentioned, and should be referenced in the text. It is advisable to avoid horizontal lines as far as possible.

5. References. It is essential that they are perfectly correct. It is not appropriate to use as references websites whose content is not necessarily verified (e.g. [www.wikipedia.org](http://www.wikipedia.org)). In the text, references to other works should follow the following format:

a) One author: González (2005) suggested or Several authors (e.g., Sáez 1996, Rodríguez 2012, Sánchez 2016) suggested.

b) Two authors: González and Sáez (2010) showed that o This pattern has been described in other systems (Rodríguez and Sánchez 2008, Pérez 2010, 2017).

c) Three or more authors: Antúnez et al. (2015) questioned this hypothesis or an observation already found in previous studies (Fernández et al. 2010, González 2018).

### 4. PROCEDURE

The process will be governed by the terms established in the FMT regulations of the UVEG (<https://www.uv.es/dp358/REGESPOST>). In accordance with it, the Academic Coordination Committee (ACC) of the master's degree establishes the following terms:

#### 3.1. Choice of tutor





- a. At the beginning of each academic year, the ACC will inform students about the subjects and possible tutor(s) (up to a maximum of 2) from among the teachers of the master's degree who have a doctoral degree and who are affiliated to the UVEG.
- b. The FMT may also be directed by any doctor from other universities, research centres, or any other entity where active research is carried out. In this case, the ACC will assign an academic tutor, who will ensure that the work maintains sufficient scientific quality and conforms, in its formal aspects, to these regulations.
- c. Once a tutor has been assigned, the student will submit, within the period established by the ACC, a work proposal (see Appendix II), including tutor and topic.
- d. The assignment of topics and tutors is valid for the defence periods of the corresponding course. If the work is not presented during that year, a new registration must be made and, where appropriate, a new tutor must be assigned.
- e. The ACC, at the request of the interested party, may assign a new subject and tutor due to a major cause affecting the tutor, due to the tutor's reasoned resignation for other reasons, or due to a reasoned request from the student.

## 5. REGISTRATION

- a. Registration for the FMT subject will be carried out during the ordinary registration period, as in the case of the other subjects.
- b. In order to be able to register for the FMT, the student must have registered for all of the remaining 60 credits.

## WORKLOAD

ACTIVITY	Hours	% To be attended
Laboratory practices	4,00	100
Graduation project		100
Development of a final project	296,00	0
<b>TOTAL</b>	<b>300,00</b>	

## TEACHING METHODOLOGY

The teaching methodology is based on the same methodology that must be applied to a theoretical or practical research project. The student is expected to carry out the Master's thesis independently. The tutor's task is to supervise each of the phases in the development of the work: the approach and objectives, the collection of previous information, the methodology and design of the work, and the obtaining and discussion of the results.



## EVALUATION

- a. The subject of FMT will have two calls per academic year.
- b. Students will have, by default, the first call on the date established by the ACC in June or July; the second call for the defence will be in September. However, upon the student's fully justified request, the defence may take place on an alternative date which, within an academic year, may in no case exceed the month of September. The specific calendar can be consulted at

<https://www.uv.es/uvweb/biology/en/postgraduate-studies/official-master-s-degrees/master-s-degree-final-project/tfm-specific-information-centre-1285906907635.html>

- c. In order to be able to defend the FMT, it must be deposited (in pdf format) through the "Entreu" platform. The document must be accompanied by the application form, in the format established by the university, indicating both the title and the name of the tutor. The document can be found at:

[https://www.uv.es/biodocs/secretaria/tramits/TFM/Solicitud\\_deposito\\_y\\_defensa\\_TFM.pdf](https://www.uv.es/biodocs/secretaria/tramits/TFM/Solicitud_deposito_y_defensa_TFM.pdf)

The student must also submit three paper copies to the secretary's office of the Faculty of Biological Sciences.

The deposit must be made at least 10 calendar days before the scheduled date of the defence.

- d. The date and time of the defence will be announced sufficiently in advance through the Virtual Classroom.
- e. The final grade of all students presented for each defence period will be recorded in a joint report.
- f. The grade of the FMT may be appealed according to the grade revision regulations at the UV.

### 1.1. Committees

- a. The FMT will be assessed by a panel of three members appointed at the beginning of the academic year.
- b. The tutor of the student presenting his/her dissertation may not be a member of the panel.

### 1.2. Defence

- a. All FMTs must be defended in a public session, unless the work is subject to processes of protection and/or transfer of technology and/or knowledge (see specific regulations at <https://www.uv.es/dp358/REGESPOST>).



b. The duration of the presentation must not exceed 20 minutes, after which there will be a discussion and question time by the panel, of discretionary length. The tutor may have a voice in the defence process.

c. At the end of the discussion, the examining board will meet briefly with the tutor in order for the tutor to communicate his/her evaluation of the dissertation (see point 3.6a), as well as to clarify any other circumstances deemed appropriate. In the event that the tutor is unable to attend the defence, he/she will have to communicate his/her mark to the examining board prior to the defence.

### 1.3. Assessment

a. Once the defence has been completed, the examining board will grade the dissertation. The assessment of the work will be made according to a rubric that will be publicly displayed sufficiently in advance. The tutor's mark will contribute up to 2 points to the final mark. The marking may be carried out at the end of the defence of several papers.

b. The members of the examining board will sign a record of the defence, which will include a numerical grade from 0.0 to 10.0 to one decimal place. In addition, the grade of Fail (0.0 to 4.9), Pass (5.0 to 6.9), Merit (7.0 to 8.9), Outstanding or Outstanding with Honours (from 9.0) will also be included.

c. If there is no unanimity in the marks among the members of the selection board, each of them will give an individual mark. In this case, the final mark will be the average of the individual marks.

## REFERENCES

### Basic

- Los/as estudiantes manejarán la bibliografía específica que requiera su tema de estudio.
- Els/as estudiants manejaran la bibliografia específica que requerisca el seu tema d'estudi.
- Students will handle the specific bibliography required for their subject of study.

## ADDENDUM COVID-19

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

This addendum is proposed as an alternative option on the structure that the FMTs (hereinafter, exceptional FMTs, or FMT-E) may adopt in the event that, for epidemiological reasons associated with covid-19, there is a major limitation in obtaining data from which to carry out a conventional FMT (FMT-C).

An ad hoc document would indicate the dates and form of deposit, presentation and defence of all the



FMTs in accordance with the most advisable academic options according to the circumstances.

### SCOPE OF APPLICATION OF THE FMT-E

The use of the FMT-E format is limited only to those cases in which, according to the criteria of the tutor(s), it is considered that there are NOT sufficient results to be able to prepare a FMT-C for presentation and defence in the current academic year.

### STRUCTURE OF THE FMT-E

As indicated in the current regulations, the competences that are intended to be developed with a FMT are that the student (1) is able to identify and clearly describe a relevant scientific problem; (2) knows how to obtain empirical evidence and analyse it quantitatively to try to provide an answer, and (3) obtains original results and knows how to make a mature interpretation and a considered discussion of them.

In all circumstances, learners can develop competences (1) and (2), as they do not depend on obtaining specific data. On the other hand, it is obvious that if data cannot be collected, it is difficult for many learners to develop competence (3) in a conventional way. The format we propose aims to achieve the three competences outlined above according to the format described below.

The FMT should follow the following outline:

a) Title page. It must contain:

- Stamp of the University of Valencia.
- Name of the master's degree
- Title of the project
- Author
- Tutor (if there is an external tutor and an academic tutor, both must be indicated)
- Month and year of submission

b) Abstract (up to 300 words) in Spanish or Valencian, and in English. It must appear on the first page. The abstract must be sufficiently precise and informative with respect to the content of the document.





c) Keywords (up to 6) in Spanish or Valencian, and in English. They should appear on the first page, immediately after the abstract.

d) Table of contents. It should appear on the second page.

e) Theoretical context. This section should be understood as a broad critical review that introduces the subject. Unlike the FMT-C, where greater conciseness is sought, this section should be considered as an exhaustive bibliographical review of the topic in which the work is included. To put it graphically: a lay biologist reader should be able to:

- (1) understand perfectly the central concepts around which the problem revolves;
- (2) know comprehensively what the current state of the question is, pointing out what is known and what is not, and/or what is controversial;
- (3) clearly identify what is/are the need(s) for new evidence, justifying the need for new research (i.e., what is known and what is not known, and/or what is controversial); and
- (3) clearly identify what is/are the need(s) for new evidence, justifying the need for new research (i.e. the FMT).

Although there is no minimum or maximum length for this section, it is strongly recommended to avoid "cut and paste", and try to synthesise your own discourse from the sources consulted (i.e. as an abridged version of a bibliographic FMT). The examining board will value, both in the written part and in the defence, a demonstrable mastery of the theoretical context by virtue of coherence and the ability to respond to any doubts that may arise.

f) Objectives. These should be set out in a separate section. The objectives should describe exactly what was intended to be done (and could not be done), and should logically reflect their connection to the theoretical context.

g) Materials and Methods. This section should explain:

- (1) how the data were to be obtained. Specifically, a description should be provided that justifies why it was done in this way (e.g., the sampling design, variables measured, etc.) so that the student demonstrates an understanding of its rational basis.



(2) how the data were to be analysed. In particular, the statistical methods to be used should be explained in detail. In the case of methods that are very specific to the field of study, their statistical basis should be described. The student should be able to justify, in the oral defence, why precisely the chosen statistical methods are used.

h) Expected results. Interpretation. We are aware that this section is the most heterogeneous, as it depends on several factors, e.g. whether the study was exploratory or confirmatory (i.e. whether it addressed specific hypotheses or not). For example, if a study aimed to investigate the diet of a species because it was poorly known, the interpretation would necessarily be post hoc, as the specific interpretation would depend on the data obtained. In contrast, in a study that set out to test specific hypotheses, it would be easier to discuss what would be implied by having obtained confirmatory or non-confirmatory evidence for alternatives a, b, c, etc.).

In any case, we believe that it is possible to elaborate this section as a short section (no more than 3 pages in the format indicated for the FMT-C) trying to answer the following questions:

- Were certain results expected to be obtained, which ones, why, and what would be the fundamental scientific contribution of the project?
- What would be the fundamental scientific contribution of this study in the theoretical context in which it is inscribed?
- What are its limitations and how could they be overcome?
- What realistic studies would be needed in the future to address these limitations, and what is key research to help move this issue forward?

i) Acknowledgements.

j) References. You may choose any of the formats usually used in scientific publications, but references should be complete and consistent.

k) Appendices (optional). If additional information needs to be included, this can be done at the end of the work, considering the most convenient format. In any case, appendices should be referenced in the text of the paper as "Appendix 1, 2,...".