VNIVERSITAT DE VALÈNCIA

Course Guide
44703 Master's final project

COURSE DATA

Data Subject	
Code	44703
Name	Master's final project
Cycle	Master's degree
ECTS Credits	30.0
Academic year	2019 - 2020

Study (s)

Degree	Center	Acad. year	Period
2224 - M.U. Investigación y Desarrollo en Biotecnología Biomedicina	Faculty of Biological Sciences	1	Second term

Subject-matter

Degree	Subject-matter	Character
2224 - M.U. Investigación y Desarrollo en Biotecnología Biomedicina	4 - Master's final project	End Labour Studies

Coordination

Name	Department
PEREZ ORTIN, JOSE ENRIQUE	30 - Biochemistry and Molecular Biology

SUMMARY

The Master Final Experimental Work is necessary to achieve the degree of Master in Research and Development in Biotechnology and Biomedicine. Professionally, it is the finding that the student is able to conduct an original research work. Specifically, it is intended that students: develop a research and experimental design, develop a scientific report and present their findings public. The director of the work must meet with the student to establish the general objective and specific objectives of the research work and carry out the design of experiments to be performed. Previously and / or in parallel with the foregoing the principal shall provide the student the necessary literature on the subject or advise on how to obtain it. It will also be the role of the director of helping students acquire the necessary skills for use of experimental techniques associated research work.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

OUTCOMES

2224 - M.U. Investigación y Desarrollo en Biotecnología Biomedicina

- 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.
- Students should possess and understand foundational knowledge that enables original thinking and research in the field.
- Be able to integrate new technologies in their professional and/or research work.
- Ser capaces de analizar de forma crítica tanto su trabajo como el de su compañeros.
- Capacidad de seleccionar y gestionar los recursos disponibles (instrumentales y humanos) para optimizar resultados en investigación.
- Ser capaces de realizar una toma rápida y eficaz de decisiones en situaciones complejas de su labor profesional o investigadora, mediante el desarrollo de nuevas e innovadoras metodologías de trabajo adaptadas al ámbito científico/investigador, tecnológico o profesional en el que se desarrolle su actividad.
- Ser capaces de acceder a la información necesaria en el ámbito específico de la materia (bases de datos, artículos científicos, etc.) y tener suficiente criterio para su interpretación y empleo.
- Aplicar el razonamiento crítico y la argumentación desde criterios racionales.
- Aplicar la Ciencia desde la óptica social y económica, potenciando la transferencia del conocimiento a la Sociedad.
- Capacidad para preparar, redactar y exponer en público informes y proyectos de forma clara y coherente, defenderlos con rigor y tolerancia y responder satisfactoriamente a las críticas que pudieren derivarse de su exposición.

- Ser capaces de trabajar en equipo, sin discriminación entre hombres y mujeres, con eficiencia en su labor profesional o investigadora adquiriendo la capacidad de participar en proyectos de investigación y colaboraciones científicas o tecnológicas.
- Capacidad para desarrollar los resultados científicos obtenidos por uno mismo o por otros científicos a las aplicaciones prácticas de rentabilidad social y/o económica.
- Ser capaz de aplicar los conocimientos adquiridos en la identificación de salidas profesionales y yacimientos de empleo.
- Adquirir las habilidades personales que faciliten la inserción y desarrollo profesional.
- Considerar el emprendimiento como alternativa profesional.
- Motivación por la calidad y la mejora continua, actuando con rigor, responsabilidad y ética profesional.
- Respeto a los derechos fundamentales y de igualdad entre hombres y mujeres.
- Capacidad de proyectar los conocimientos, habilidades y destrezas adquiridos para promover una sociedad basada en los valores de la libertad, la justicia, la igualdad y el pluralismo.
- Aprendizaje en la redacción de artículos científicos en los campos de la Biomedicina y la Biotecnología.
- Utilizar adecuadamente las herramientas informáticas, métodos estadísticos y de simulación de datos, aplicando los programas informáticos y la estadística a los problemas biomédicos y biotecnológicos.
- Dominar el método científico, el planteamiento de protocolos experimentales y la interpretación de resultados en el ámbito biomédico y biotecnológico.
- Ser capaces de aplicar la experiencia investigadora adquirida tanto en la empresa privada como en organismos públicos.
- Saber diseñar estrategias experimentales multidisciplinares en el ámbito de las biociencias moleculares para la resolución de problemas biológicos complejos, especialmente los relacionados con salud humana.
- Adquirir destrezas en el manejo de las metodologías avanzadas empleadas en las biociencias moleculares y en el registro anotado de actividades.
- Mejorar la capacidad para trabajar de manera autónoma, responsable y rigurosa en el laboratorio, aplicando los conocimientos sobre los aspectos legales y prácticos en la manipulación y eliminación de agentes de riesgo.
- Mejorar la capacidad de trabajar con seres vivos o muestras biológicas.
- Aprendizaje del uso de la instrumentación y equipamientos empleados en los laboratorios de biotecnología y biomedicina.
- Conocer las aplicaciones de los nuevos conocimientos emergentes en el diagnóstico, prevención y tratamiento de las enfermedades humanas.

- Saber aplicar los principios éticos y legales de la investigación científica en biotecnología y biomedicina.
- Profundizar en el papel del profesional en biotecnología y biomedicina en el contexto científico y social y su contribución en el modelo económico.
- Saber utilizar un lenguaje integrador y no discriminatorio en todos los ámbitos de la comunicación anteriormente mencionados.

LEARNING OUTCOMES

Knowing the scientific method and experimental correct guidelines.
Knowing how to interpret a scientific article and information to develop an experimental work.
Know how to write a research paper.
Knowing orally present a research paper with the help of a presentation program visual.
Manage the right resources to get information and managing scientific literature.
Form a critical mind when interpreting both the problems to be addressed, such as results.

WORKLOAD

ACTIVITY	Hours	% To be attended
Graduation project		100
*Realización del Trabajo Fin de Máster	650,00	0
Seguimiento i tutorización del Trabajo Fin de Máster	50,00	0
Presentación y defensa del Trabajo Fin de Máster	20,00	0
TOTAL	**720,00**	

TEACHING METHODOLOGY

In principle, it is anticipated that the research work preferably develops throughout the second semester of the academic year in which the student enroll the master and defended in July or September of this year. However, space development work will almost always depending on the evolution of the same in the laboratory.
Before starting work, each student will enroll, delivering a letter signed by himself and by the director(s) stating the title (the final will be slightly different), and a summary of an extension between 250 and 500 words including work objectives. The Academic Coordination Committee shall inform and student and Director of the approval or rejection of the inscription. The work must be designed so that implementation is feasible within the workload mentioned above. It should carry out a job in which present and analyze experimental results and / or bioinformatics. The work address provide students with a basic bibliography and objectives to achieve. Management periodically monitor (tutorials) work progresses according to the proposed objectives and at an appropriate pace for conclusion during the mentioned period.
At the end of the investigation, the student will prepare a report, within the limits of 20 and 40 pages in

A4 format, with margins of 2.5 cm and 1.5 line spacing, Arial 12. The work may be presented in either of the two official languages of the University of Valencia or in English. 4 copies of the printed work will be presented (3 shall be returned to the board members in paper and digital format version (ENTREU platform).

The memory structure will follow a scientific article:

On the first page shall contain the following legend: Master's thesis. Master in research and development in biotechnology and biomedicine. University of Valencia. Author (a). Director (s) and affiliation. Tutor (if applicable).

In the following pages will appear in this order: Summary (abstract) and keywords, Introduction, Materials and Methods, Results, Discussion (separate or combined) and Bibliography.The report will contain figures or tables needed to work more understandable.

The work must be submitted well in advance of the date of defense. The exact dates will be informed in each call.

The defense will consist of a public exhibition with a maximum duration of 20 minutes a period of approximately 10 minutes to answer the questions of the court.

EVALUATION

The score of the work will be based on three criteria:

1) General approach of the work (40%).
The quality of research, the difficulty of laboratory methods or the software used, and how the student has developed the objectives and originality of the approaches used are assessed.

2) Evaluation of the written memory (30%).
The student must submit a report of the research work (as described in the teaching methodology). In the drafting work memory correct and complete description of the experiments, the validity of the conclusions and conciseness and appropriate use of written language will be valued. the way in which the student has raised and discussed the results are also evaluated.

3) Evaluation of the oral presentation (30%).
The student will have to orally present the research during a period of approximately 20 minutes, and then subjected to a round of questions by the court. In this test the clarity of exposure, proper distribution of time between the filing of the problem and presentation of the results and conclusions, the correct use of measured language, matching the visual presentation, scientific knowledge that the student to demonstrate the issue and precision in the responses to questions.

The composition of the tribunal shall be adapted as determined by the Master's Academic Committee (CEC) and the rules of the University of Valencia. The works presented in the form "Innovating with UV Technologies" will be evaluated with a specific court.

REFERENCES

Basic

- Day, R. A. (1979). How to write and publish a scientific paper. ISI Press Philadelphia.

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