Universitat de les Illes Balears

Academic year	2017-18
Subject	11264 - Master's Thesis
Group	Group 1, AN
Syllabus	A
Language	English

Syllabus

Subject

Name 11264 - Master's Thesis
Credits 0.52 in-class (13 hours) 5.48 distance (137 hours) 6 total (150 hours).
Group Group 1, AN (Campus Extens)
Period Annual
Language Spanish

Lecturers

Lecturers	Office hours for students					
	Starting time	Finishing time	Day	Start date	End date	Office
Andreu Palou Oliver andreu.palou@uib.es	You need to book a date with the professor in order to attend a tutorial.					
Ana María Rodríguez Guerrero amrodriguez@uib.es	15:00	16:00	Monday	01/09/2017	31/07/2018	Office Q.11 (Mateu Orfila building, Campus UIB)

Context

The students must successfully complete a practical/placement subject (Practicum), where the students have to carry out a significant piece of training work under the direction of a tutor: a lecturer from the master with the grade of PhD in the case of profile 2A students, and a tutor from one of the collaborating Food Enterprises together with a lecturer with the grade of PhD (who will follow the student's development in the business enterprise) in the case of profile 2B students. The Practicum is tightly linked to this subject of final project, the Final Master's Work (both subjects form together the compulsory module of “Final Master’s Work”, the assessment of which includes the presentation of a report of the work carried out in the practicum, including results and a scientific discussion of them). This report will be defended in public before an examining board approved by the Master's management committee and made up by doctors from the course and, if necessary, external staff from the entrepreneurial field and invited doctors. The examining board will assess the student report and its public defence, which will be considered in the final mark.

Learning results:

- Integrating the knowledge acquired with the rest of the Master’s subjects by elaborating a written report related with the field of research and development in the field of Nutrigenomics.

- Elaborating a scientific report, complete and of quality.

- Defending the elaborated report by examination with a specialized board and in public defence.

Lecturers:

- Dr. Andreu Palou is Professor in Biochemistry and Molecular Biology of the University of the Balearic Islands; with six six-year research expertize stretches recognized by the Spanish Government and wide teaching and research experience. He is the co-Director of the Master in Nutrigenomics and Personalised

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Nutrition. He is also the Director of the Laboratory of Molecular Biology, Nutrition and Biotechnology of the UIB and has leaded several coordinated international research projects as Principal Investigator, having more than three-hundred research papers, different patents and having received various research prizes.

- Dr. Ana M. Rodríguez is PhD in Biochemistry and associate professor of the University of the Balearic Islands; with three six-year research expertize stretches recognized by the Spanish Government and wide teaching experience at the University. She is the co-Director of the Master in Nutrigenomics and Personalised Nutrition. She is also an active researcher; at present, her research is focused in the field of gene-nutrient interactions and the relationship of nutrients and early nutritional interventions with the prevention of metabolic disorders associated to energy control, obesity and associated disorders, including the effect on adipose tissue, skeletal muscle and brain heath. She has participated in numerous international cooperative research projects.

Requirements

To be able to do the final part of the subject, i.e. the public defence with an examining board of the Final Master's Work, it is necessary the student has passed all the rest of the subjects of the Master.

Skills

Specific

* E10 – Knowing the last advances in the field of Nutrigenomics, Personalised Nutrition and Molecular Nutrition and acquiring the abilities necessary for being in constant actualization..

Generic

* G1 – Capacity to apply critical, logic and creative thinking in their work..
* G10 – Capacity to articulate the knowledge in oral and written presentations..
* G11 – Advanced comprehension of the global context where the speciality area is developed..
* G13 – Knowing the capacities and possibilities of TIC (Technologies of Information and Communication) in the area of the discipline..
* G15 – Ability to analyse the risk/benefit balance of a new development (or innovation)..
* G3 – Capacity to work in an autonomous way, with initiative, and to solve problems in an effective way..
* G5 – Ability to analyse data and to get conclusions from the research results..
* G7 – Respect for the intellectual ethics and integrity..
* CB9 – The students must know how to communicate their conclusions, and the knowledge and ultimate reasons which support them, to specialised and non-specialised publics in a clear way without ambiguity..
* CB10 – The students must have the abilities for learning necessary for them to continue studying in a way mainly self-directed and autonomous..
* CB8 – The students must be able to integrate knowledge and to face the complexity of formulating judgements from information which, although being incomplete or limited, includes reflexions about the social and ethic responsibilities linked to the application of their knowledge and judgements..
* CB6 – Having and comprehending knowledge giving a base or opportunity for being original in the development and/or application of ideas, often in a context of research..
* G6 – Capacity for working in an interdisciplinary way..
* G4 – Capacity to formulate hypotheses and to design suitable studies for their verification..
* G2 – Knowing how to incorporate the scientific advances to the own professional field..

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* G14 – Knowing in depth the ambit of the Scientific Research and its repercussion in the society..
* G12 – Capacity to develop their work in English (lingua franca of the discipline)..

Basic

* You may consult the basic competencies students will have to achieve by the end of the Master's degree at the following address: http://estudis.uib.cat/master/comp_basiques/

Content

The alumni have to write a report, corresponding the Final Master's Work, related with their participation in a research work (basic or applied) or research and development work.

The corresponding instructions for the writing of the report will be given to the students at the beginning of the academic year. The alumni will be tutored by a PhD lecturer of the Master in the elaboration of the Final Master's Work. Once the report is finished and after having the permission of the tutor, the alumni will be able, by following the UIB normative, to do the necessary procedures for the public defence of the Final Master's Work and their assessment by an expert board approved by the direction of the Master which will include PhD lecturers of the master and, when appropriate, external staff from the professional entrepreneurial sector or invited lecturers. For each student, the corresponding board will do an assessment of the delivered report and its defence, which will determine the final mark. This constitutes the final step necessary for getting the Master degree.

There are different research lines associated to the FMW, also associated with the practicum. At the beginning of the academic year, the students will be informed about these lines (and the tutors associated to them) in order they can manifest their preferences (by filling a survey form). The applications will be evaluated by the Academic Commission of the Master and its members will make the assignations, taking into account the preferences of the students. In case a same line/tutor is chosen by more than one student, the Academic Commission, together with the corresponding tutor, will make the assignment considering the CV and the academic marks of the previous studies of the students (in case it is considered necessary, also a personal interview can be done). The list with the assignment of students to the lines/tutors will be sent to the Centre of Postgraduate Studies.
At the present moment of publication of this teaching guide (July 2017), the offer of research lines and tutors is the list given below, although it can suffer modifications and the definitive list will be given to the students at the beginning of the lessons:

For students in profile 2A

- New nutrigenomic biomarkers and health claims on food (Andreu Palou, lecturer at the UIB).

- Effects of saturated and unsaturated fatty acids on muscle cell myokine production (in vitro) (Ana M. Rodríguez, lecturer at the UIB).

- Molecular and nutrigenomic basis of the health effects of physical activity and the function of muscle cells (Ana M. Rodríguez, lecturer at the UIB).

- Screening, identification and selection of genetic markers useful in the definition of genetic risk scores (Francisca Serra, Professor at the UIB).

- Analysis of available dataset on the impact of maternal nutrition on maternal milk composition and on human babies (Francisca Serra, Professor at the UIB).

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- Bioactive and functional components of maternal milk with potential interest in the future metabolic health of offspring. Experimental design to test in rats the effects of a candidate component. (Catalina Picó, Professor at the UIB).

- Bioactive compounds with potential interest during lactation to prevent increased susceptibility of obesity in offspring. Experimental design to test in rats the effects of a candidate component. (Catalina Picó, Professor at the UIB).

- Molecular nutrition in relation to the control of body adiposity (M. Luisa Bonet, lecturer at the UIB).

- Bioactive and functional components of food regarding metabolic health (M. Luisa Bonet, lecturer at the UIB).

- Study of bioactive compounds on adipose tissue biology modulating obesity development (Paula Oliver, lecturer at the UIB).

- Microarray transcriptomic data analysis: molecular alterations in obesity (Paula Oliver, lecturer at the UIB).

- Design an experiment to study the effect of carotenoids and their derivates on the prevention of a metabolic disease. It could include a short experiment in a culture cell system (Joan Ribot, senior lecturer at the UIB).

- Analysis (with free available tools) of omics experiments on the effect of beta-carotene on adipose biology. It could include a short experiment in a culture cell system (Joan Ribot, senior lecturer at the UIB).

- Design an experiment to study the effect of a bioactive compound on the prevention of a metabolic disease. (Juana Sánchez, lecturer at the UIB).

- Screening of free available tools for the analysis of omics experiments (Juana Sánchez, lecturer at the UIB).

- Every academic year, there is also the possibility to arrange a practicum and the subsequent FMW in collaboration with one of the laboratories of the research network CIBERobn, after the request of the student and the acceptance of the receipt laboratory.

- If one student is interested in doing a specific-only-theory work (without laboratory work and choosing a topic of interest), it can propose it to the coordinators of the subject in order to analyse the viability of such work for TFM and to assign an academic tutor.

For the students enrolled in profile 2B:

- Research and development in food enterprises: Biópolis S.L. (placement 1) (Joan Ribot + tutor of the enterprise)

- Research and development in food enterprises: Bioseach Life (Puleva Biotech + Exxentia) (placement 1) (M. Luisa Bonet + tutor of the enterprise)

- Research and development in food enterprises: Biosearch Life (Puleva Biotech + Exxentia) (placement 2) (M. Luisa Bonet + tutor of the enterprise)

- Research and development in food enterprises: CIBERobn (Oficina de proyectos) (placement 1) (Paula Oliver + tutor of the enterprise)

- Research and development in food enterprises: CIBERobn (Oficina de proyectos) (placement 2 (Paula Oliver + tutor of the enterprise)

- Research and development in food enterprises: ALIMENTÓMICA S.L. (placement 1) (Francisca Serra + tutor of the enterprise).

- Research and development in food enterprises: ALIMENTÓMICA S.L. (placement 2) (Juana Sánchez + tutor of the enterprise)

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- Research and development in food enterprises: CTNS (placement 1) (Ana M. Rodríguez + tutor of the enterprise)

- Research and development in food enterprises: CTNS (placement 2) (Catalina Picó + tutor of the enterprise)

- Research and development in food enterprises: cluster BIOIB (placement 1, to be done in May) (Ana M. Rodríguez – tutor of the enterprise)

- Research and development in food enterprises: cluster BIOIB (placement 2, to be done in June) (Catalina Picó – tutor of the enterprise)

Theme content

Final Master's Work. Written report

Teaching methodology

In-class work activities

Modality	Name	Typ. Grp.	Description	Hours
ECTS tutorials	Tutorial sessions with the tutor/s and coordinators	Small group (P)	Tutorial sessions with the tutor/s for guiding in the process of the elaboration of the Final Master's Work. Some sessions with the coordinators of the subject will be also necessary to know the correct procedures to follow.	12
Assessment	Public defence of the Final Master's Work	Large group (G)	Public defence of the Final Master's Work with an examining board.	1

At the beginning of the semester a schedule of the subject will be made available to students through the UIBdigital platform. The schedule shall at least include the dates when the continuing assessment tests will be conducted and the hand-in dates for the assignments. In addition, the lecturer shall inform students as to whether the subject work plan will be carried out through the schedule or through another way included in the Campus Extens platform.

Distance education work activities

Modality	Name	Description	Hours
Individual self-study	Elaboration of the Final Master's Work	Preparation and writing of the report of the Final Master's Work (including the review of bibliography, its study and the data processing) and preparation of its defence.	137

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Specific risks and protective measures

The learning activities of this course do not entail specific health or safety risks for the students and therefore no special protective measures are needed.

Student learning assessment

The guidelines for assessment of the Final Master's Work are given below. In brief: each student must deliver a written report following the instructions given by the coordinator of the subject (the guidelines for the writing and delivery of the report will be given to the students at the beginning of the academic year and will be available in Campus Extens), the report will be defended in public before and examining board, the composition of which will follow the rules given by the academic rules of the University. Also, there will be specific guidelines for the public defense of the FMW that will be given to the students at the beginning of the academic year.

Public defence of the Final Master's Work

Modality	Assessment
Technique	Oral tests **(non-retrievable)**
Description	Public defence of the Final Master's Work with an examining board.
Assessment criteria	A report of the work carried out in the practicum must be presented, including results and a scientific discussion of them. This report will be defended in public before an examining board approved by the Master's management committee and made up by doctors from the course and, if necessary, external staff from the entrepreneurial field and invited doctors. The examining board will assess the student report and its public defence, which will be considered in the final mark.

Final grade percentage: 100%

Resources, bibliography and additional documentation

Basic bibliography

All relevant bibliography, mainly based on papers from international scientific journals and scientific data bases, as well as specific bibliography given by the directors of the Final Master's Work.

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