

Academic year	2016-17
Subject	11263 - Practicum
Group	Group 1, AN
Teaching guide	A
Language	English

Subject identification

Subject	11263 - Practicum
Credits	6.8 de presencials (170 hours) 2.2 de presencials (55 hours) 9 de totals (225 hours).
Group	Group 1, AN (Campus Extens)
Teaching period	Annual
Teaching language	Spanish

Professors

Lecturers	Horari d'atenció als alumnes					
	Starting time	Finishing time	Day	Start date	Finish date	Office
Andreu Palou Oliver andreu.palou@uib.es	You need to book a date with the professor in order to attend a tutorial.					
Joan Ribot Riutort joan.ribot@uib.es	12:00	14:00	Friday	01/09/2016	17/07/2017	Despacho Q-31 (Edificio Mateu Orfila) - Room Q-31 (Building Mateu Orfila)
Ana María Rodríguez Guerrero amrodriguez@uib.es	15:30	16:30	Monday	01/09/2016	30/06/2017	Q.11 (Mateu Orfila)

Contextualisation

The Practicum is tightly linked to this subject of final project, the Final Master's Work (FMW). 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. With this subject, the objective is to integrate the students into a real research project so they become accustomed to the world of scientific research or into a company in the field of molecular nutrition, functional foods, nutrigenomics and personalized nutrition so they experience first-hand the world of scientific research and applied nutrition in the real environment.

Lectures:

- * Dr. Andreu Palou is Professor in Biochemistry and Molecular Biology of the University of the Balearic Islands; with six six-year research expertise stretches recognized by the Spanish Government and wide teaching and research experience. He is the co-Director of the Master in Nutrigenomics and Personalised Nutrition. He is also the Director of the Laboratory of Molecular Biology, Nutrition and Biotechnology of the UIB and has led 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 two six-year research expertise stretches recognized by the Spanish Government and sixteen years of 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

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of metabolic disorders associated to energy control, obesity and associated disorders, including the effect on adipose tissue, skeletal muscle and brain health. She has participated in numerous international cooperative research projects.

- * Dr. Joan Ribot is PhD in Biochemistry, specialist in Clinical Biochemistry and associate professor of the University of the Balearic Islands; with 3 six-year research expertise stretches recognized by the Spanish Government and eighteen years of teaching experience at the University. He 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 atherosclerosis and Cancer. He has participated in numerous international cooperative research projects.

Requirements

The requirements for this subject are given below.

Recommendable

It is recommended that the students pass or at least do an important part of the rest of the subjects of the Master before they do the practical training in a company of the field.

Skills

The skills of the Master related to this subject are given below.

Specific

- * E9 - Apply specific laboratory techniques related to the field of Molecular Nutrition and Nutrigenomics.
- * E11 - Ability to work proficiently in a professional environment related to Nutrigenomics, Personalized Nutrition, Molecular Nutrition and Functional Foods.

Generic

- * G1 – Capacity to apply critical, logic and creative thinking in their work.
- * G2 – Knowing how to incorporate the scientific advances to the own professional field.
- * G3 – Capacity to work in an autonomous way, with initiative, and to solve problems in an effective way.
- * G4 – Capacity to formulate hypotheses and to design suitable studies for their verification.
- * G5 – Ability to analyse data and to get conclusions from the research results.
- * G6 – Capacity for working in an interdisciplinary way.
- * G7 – Respect for the intellectual ethics and integrity.
- * G8 - Ability to assess and participate in teamwork.
- * G9 - Ability to collect, organize and critically analyze the literature (research and professional) of the discipline.
- * G11 – Advanced comprehension of the global context where the speciality area is developed.
- * G14 - Knowing in-depth the field of scientific research and its impact on society.
- * 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.
- * CB7 - That the students can apply their knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.

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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

This subject is the practicum for the 2A and 2B pathway. This subject is linked to the content of the subjects 'Seminars on Research in Nutrigenomics' and 'Seminars on Development and Innovation'. The subject is also tightly linked to the 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. Furthermore, the subject is an introduction to the field of research and development and can act as a link between the training courses and the commencement of experimental research in a doctorate.

Theme content

2A. Research Work

Each student must do a practical training (1 month) under the direction of a tutor with the grade of PhD from one of the following research groups of the University of the Balearic Islands and the Rovira i Virgili University:

- * Biochemistry, molecular biology, nutrition and biotechnology - nutrigenomics (UIB).
- * Clinical and translational Research (UIB).
- * Nutrigenomics (URV).

There is the possibility to do practical training in one of the research groups of the Centro de Investigación Biomédica en Red Fisiopatología de la Obesidad y Nutrición (CIBERObn) which have signed an agreement with the UIB to participate in the Master in Nutrigenomics and Personalised Nutrition.

2B. Research and development in food enterprises

Each student must do a practical training (1 month) in one of the Enterprises that have signed an agreement with the UIB to participate in the Master in Nutrigenomics and Personalised Nutrition. At the present moment of publication of this teaching guide the collaborating companies or organizations are Unilever España S.A., Grupo Leche Pascual, Biosearch life (former Puleva-Biotech), Biopolis SL, CIBERObn (Project management office) and ALIMENTÓMICA SL.

Teaching methodology

At the beginning of the academic year or semester, the definitive list of research, development or innovation lines and tutors will be given (a tentative list are given in FMW teaching guide) and the students will be assigned to the different tutors taking into account their academic marks and their previous experience in research (CV), as well as their preferences. Students must respect and follow the rules of the laboratories or companies/organizations where they do the practical training. The tutor will include them in a current research, development or innovation project to train them in I+D+I and will provide students with the necessary bibliography for their I+D+I field.

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It must be taken into account that some of the placements (specially for the collaborating companies) will be in the main land (outside of the Balearic Islands), so the students will have to move, for 1 month, to other province of the country.

Workload

The estimate for the time consumed by the different activities of the subject is given below.

In-class work activities

Modality	Name	Typ. Grp.	Description	Hours
Theory classes	Informative sessions	Large group (G)	The objective is to inform the students about the development of the subject 2 sessions in the classroom will be done with the coordinators of the Practicum (at the beginning of each semester).	4
Practical classes	Practical training	Medium group 2 (X)	The objective is to put in practice the theory concepts and skills learnt in the subjects of the Master. Training. Supervisors will provide students with the necessary bibliography and materials for the development of the practicum. * 2A: Students will have a placement in one of the research groups under the supervision of a academic tutor, allowing students to gain experience in the world of research related with the field of the Master. * 2B: Students will have a placement in one of the collaborating enterprises under the supervision of a company tutor with co-tutoring from one lecture of the University, allowing students to gain experience in the world of research, development, innovation quality control and/or research management, applied to the enterprises/industries related with the field of the Master.	160
ECTS tutorials	Tutorial sessions	Small group (P)	The objective is to follow students' progress and supervise the assessment works. Sessions with the tutors or Practicum coordinator.	6

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

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Modality	Name	Description	Hours
Individual self-study	Consultation of complementary bibliography and data analysis	The objective is to put in practice the theory concepts and skills learnt in the subjects of the Master. Reading and study of recommended bibliography, analysis of the own research data and/or extract conclusions from results of research, development and/or innovation .	40
Individual self-study	Summary and questionnaire for auto assessment	The objective is to put in practice the theory concepts and skills learnt in the subjects of the Master. The students must do a summary of the work done in the practicum and a questionnaire (prepared by the coordinator) of auto-assessment (corrected by the coordinator). For the summary and the questionnaire questions, a word-limit will be given.	15

Specific risks and protective measures

The risks the students of the subject may be exposed to are many (specially for the students enrolled in profile 2A), since the subject must be developed almost entirely in the research laboratories. Including disease risks (by chemicals, physical agents and biological agents), security risks and ergonomic risks.

Due to the existence of these risks, it is necessary to follow specific healthy and safety rules and guidelines, which will be explained by supervisors or tutors before and at the beginning of the practical training period in accordance with RD 1791/2010, which approves the Statute of the college student.

In the same way, depending on the risks, the supervisors or tutors will show the personal protective equipment (PPE) and other necessary protective staffs and monitor their use. The supervisors or tutors will also explain how to properly manage the waste generated in the laboratory and how to discard it in appropriate containers, according to the safety lab instructions.

The security information required will be delivered printed or will be available in the database of the laboratory. In addition, students will sign and deliver a compromise of independence, integrity and confidentiality, including the statement of having understood the safety information provided and the compromise to inform their supervisor about any problem.

Student learning assessment

The methods for assessment are given below.

Practical training

Modality	Practical classes
Technique	Other methods (non-retrievable)
Description	The objective is to put in practice the theory concepts and skills learnt in the subjects of the Master. Training. Supervisors will provide students with the necessary bibliography and materials for the development of the practicum. *2A: Students will have a placement in one of the research groups under the supervision of a academic tutor, allowing students to gain experience in the world of research related with the field of the Master.*2B: Students will have a placement in one of the collaborating enterprises under the supervision of a company tutor with co-tutoring from one lecture of the University, allowing students to gain experience in the world of research, development, innovation quality control and/or research management, applied to the enterprises/industries related with the field of the Master.

Assessment criteria

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Two items:

- * Completing time in the enterprise (30%).
- * Attitude, interest and capacities for the work done (base on a report of the direct supervisors or tutors) (40%).

Final grade percentage: 70%

Summary and questionnaire for auto assessment

Modality	Individual self-study
Technique	Other methods (retrievable)
Description	The objective is to put in practice the theory concepts and skills learnt in the subjects of the Master. The students must do a summary of the work done in the practicum and a questionnaire (prepared by the coordinator) of auto-assessment (corrected by the coordinator). For the summary and the questionnaire questions, a word-limit will be given.
Assessment criteria	Quality and accuracy of the answers to the questions.

Final grade percentage: 30%

Resources, bibliography and additional documentation

Depending on the specific practical training, the tutors will help the students with the selection of the appropriate bibliography.

Basic bibliography

All relevant bibliography, mainly the bibliography given by the enterprise, international journal articles and online scientific databases related to the student's field of study, developed under academic supervision.

