

Syllabus

Subject

Subject / Group	10284 - Functional Foods / 1
Degree	Master's Degree in Nutrigenomics and Personalized Nutrition
Credits	3
Period	Second semester
Language of instruction	English

Professors

Lecturers	Office hours for students					
	Starting time	Finishing time	Day	Start date	End date	Office / Building
Lluís Arola Ferrer	You need to book a date with the professor in order to attend a tutoring session.					

Context

PROFESSORS:

Prof. Lluís Arola is the responsible for this subject. He is a full professor of the University Rovira i Virgili (URV) and the head of the Nutrigenomics group of the Department of Biochemistry and Biotechnology of the URV. He is also the General Manager of the Technology Centre of Nutrition and Health which is a scientific and technological institution that provides to the food companies scientific support to the functional foods and nutraceuticals design innovative process. He has also participated on several panels, boards and advisory committees on nutrition and health research for many companies and institutions. He has a long-standing experience in the field of metabolism modulation by nutrients, mainly phenolic compounds and he is author of more than 200 publications providing important contributions on the health effects and mechanistic role of flavonoid compounds, particularly procyanidins, on cardiovascular health.

PhD Puiggròs holds a PhD in Biochemistry achieved as a result of his research (2000-2005) on the health effects of polyphenolic compounds on the oxidative metabolism carried on in the Nutrigenomics Research Group from the URV (Tarragona, Spain) directed by Prof Lluís Arola. In 2008, he began to work as a technology promoter in the Technology Centre of Nutrition and Health, which currently belongs to EURECAT, the main Technology Centre in Catalunya. At present, he is Scientific Manager of Biotechnology Area in Eurecat. His expertise is focused on assessing and designing scientific strategy to the food industry who is innovating in healthy and functional foods or nutraceuticals. He is very knowledgeable on the scientific criteria to test biological effect of bioactive compounds and get scientific evidence according to the UE regulatory criteria. His scientific background, with 15 scientific publications (including two book chapters), has been built through the combination of his tasks as a scientific manager combined with teaching activities as an associate professor at the URV.

SUBJECT

Functional foods is a subject aimed at providing a global view of all those issues related with the food products that bear health and nutritional claims. Functional foods, nutraceuticals, dietary supplements and other all have in common health messages linked to their consumption, so the scientific data behind them are critical in terms of consumer confidence, safety and ethical issues. Furthermore, legal frameworks have been evolved

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along with the growing demand of these products. Nowadays, food industry faces new challenges to adapt healthy products to the European and worldwide different regulations.

Requirements

Skills

Specific

- * To know the main physiological mechanisms and nutritional intervention of most relevant chronic pathologies in occidental societies. .
- * To know the bioactive compounds naturally occurring in foods. .
- * To know the strategies for substantiating health and nutritional claims made on foods in the European Union. .

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

General course about functional foods

Range of topics

1. Theme 1
Functional food concept and their scientific assessment
2. Theme 2
Legal issues on functional foods in the European Union
3. Theme 3
Bioactive compounds of functional foods
Cardiovascular disease
Bone health
Physical Performance and Fitness
Body weight regulation, insulin sensitivity and diabetes risk
Cancer
Mental state and performance
Gut health and immunity
Miscellany
4. Theme 4

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Marketing and economic issues, ethics and the consumer view towards functional foods.

Teaching methodology

At the beginning of the semester, it will be available the subject schedule throughout UIB digital platform. This schedule will include at least the dates of exam, the continuous tests dates and the delivery dates of the work. Furthermore, the teacher will advise to students when the work plan is developed through schedule or, otherwise, using alternative paths, such as the Campus Extens platform

In-class work activities (0.4 credits, 10 hours)

Modality	Name	Typ. Grp.	Description	Hours
Theory classes	Classes teòriques	Large group (G)	Exam not needed in case of performing oral presentation 50% of mark	10

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 Aula Digital platform.

Distance education tasks (2.6 credits, 65 hours)

Modality	Name	Description	Hours
Individual self-study	Individual work	All students should perform individually a written work related with theme 3 that it will be evaluated. The work must consist of a critical report about a today marketed functional food. It can be chosen more than one food but only a one risk factor of a given pathology. Max. length: 10 pages. 50% of mark	65

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

All students should perform individually a written work related with theme 3 that it will be evaluated. The work must consist of a critical report about a today marketed functional food. It can be chosen more than one food but only a one risk factor of a given pathology. Max. length: 10 pages. 50% of mark

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Short answers tests (retrievable) 50% of mark

Frau en elements d'avaluació

In accordance with article 33 of Academic regulations, "regardless of the disciplinary procedure that may be followed against the offending student, the demonstrably fraudulent performance of any of the evaluation elements included in the teaching guides of the subjects will lead, at the discretion of the teacher, a undervaluation in the qualification that may involve the qualification of "suspense 0" in the annual evaluation of the subject".

Classes teòriques

Modality	Theory classes
Technique	Short-answer tests (retrievable)
Description	Exam not needed in case of performing oral presentation 50% of mark
Assessment criteria	Correct answers.

Final grade percentage: 50% for pathway A

Final grade percentage: 50% for pathway B

Individual work

Modality	Individual self-study
Technique	Student internship dissertation (non-retrievable)
Description	All students should perform individually a written work related with theme 3 that it will be evaluated. The work must consist of a critical report about a today marketed functional food. It can be chosen more than one food but only a one risk factor of a given pathology. Max. length: 10 pages. 50% of mark
Assessment criteria	Correct dissertation.

Final grade percentage: 50% for pathway A

Final grade percentage: 50% for pathway B

Resources, bibliography and additional documentation

