



IDENTIFYING DATA

Product Innovation and Process

Subject	Product Innovation and Process			
Code	V11M085V02402			
Study programme	Máster Universitario en Ciencia y Tecnología de Conservación de Productos de la Pesca			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	3	Mandatory	1st	2nd
Teaching language	Spanish Galician			
Department				
Coordinator	Longo González, María Asunción			
Lecturers				
E-mail				
Web	http://webs.uvigo.es/pesca_master/			
General description	This course will cover aspects such as the description of the process of launching a new product, approach and development of life studies, methodologies for the development of new products, innovation in process, future prospects in fishery and aquaculture products, methodologies for estimating production costs, map of R&D&I funding.			

Training and Learning Results

Code	
A3	That students are able to integrate knowledge and face the complexity of making judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments.
A4	That students know how to communicate their conclusions, and the knowledge and ultimate reasons that sustain them, to specialized and non-specialized audiences in a clear and unambiguous way.
A5	That students have the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
B1	That the students acquire the comprehension, analysis and synthesis capacities.
B4	That the students develop the problem-solving abilities of application of the theoretical knowledge in practice.
C15	Know the critical variables that determine the viability of a product or novel processes. Use tools to obtain critical information for feasibility.
D1	Ability to understand the meaning and application of the gender perspective in the different fields of knowledge and professional practice with the aim of achieving a more just and egalitarian society.
D2	Sustainability and environmental commitment. Equitable, responsible and efficient use of resources.
D5	Commitment to ethics in the profession and in society.

Expected results from this subject

Expected results from this subject	Training and Learning Results
That students know the management and innovation to develop new processes and new products successfully	A3 A4 B1 B4 C15 D1 D2

That students know the future prospects of fishing and aquaculture products.	A3 A5 B1 B4 C15 D2
That students know innovation in new types of packaging	A3 A5 B1 B4 C15 D2 D5
That students know the necessary aspects for the processing of R&D&i grants.	A3 A4 B1 B4 C15 D2 D5

Contents

Topic	
1. Processing and conservation of sea products.	- Managing innovation for the succesful development of new products and new processes.
2. Elaboration of new products.	- Methodologies for the development of novel products
3. Creative processes applied to the innovation.	- Future prospects for fishery and aquaculture products.
4. Innovation in packaging.	- General aspects - Use of polymers.
5. R&D&i funding	- Map of funding - The environment of public support for innovation

Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	14	35	49
Case studies	4	8	12
Studies excursion	2	4	6
Seminars	2	2	4
Objective questions exam	1	1	2
Self-assessment	1	1	2

*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

Methodologies

	Description
Lecturing	Explanation by the lecturer of the contents of the course, theoretical bases and exercises to be developed by the student. Blackboard and audiovisual means will be used.
Case studies	Resolution of cases, doubts and queries both individually or in a small group regarding the follow-up and study of the course contents.
Studies excursion	Activities of application of knowledge to specific situations and acquisition of basic and procedural skills related to the subject matter of study. They take place in non-academic outdoor spaces. These include field practices, visits to events, research centers, companies, institutions, etc.
Seminars	Personalized and/or group tutorials: student interviews with the course's teaching staff for advice / development of activities of the learning process.

Personalized assistance

Methodologies	Description
Lecturing	The lecturers will answer the questions posed by the students, in face-to-face or online tutorials, or by email.
Seminars	The student receives, in group and/or individually, advice from the teacher on the theoretical and practical concepts of the subject, for the development of the objectives of the course.
Studies excursion	Guidance and advice in a small group by the teacher on the concepts of field practices, company visits, etc.

Case studies The student will be guided in the acquisition of basic skills and problem solving related to the subject matter of study. The progress of the student will be monitored.

Assessment							
	Description	Qualification	Training and Learning Results				
Lecturing	The attendance and participation of the students in the classes, in the discussion of contents and exercises, will be evaluated.	20	A3 A4	B1	C15	D1 D2	
Case studies	Problem solving and practical cases will be evaluated, as well as the student's autonomous work.	20	A3 A4 A5	B1 B4	C15	D1 D2 D5	
Objective questions exam	There will be an exam with multiple choice questions that will evaluate the theoretical and practical knowledge acquired in the course.	40	A3 A5	B4		D2 D5	
Self-assessment	Test-type questionnaires will be carried out through the teaching platform, so that students can evaluate their degree of acquisition of the subject's competences.	20	A3 A5	B4		D1 D5	

Other comments on the Evaluation

To pass the course, the student must obtain a grade equal to or greater than 4.5 points out of 10 in the final exam. In case of not reaching this grade, a "Fail" grade will be assigned, with the numerical value of the grade obtained in the final exam.

Sources of information

Basic Bibliography

Benavides C.A, **Tecnología, innovación y empresa**, Ed. Ediciones Pirámide.,

Henry Chesbrough, **Open Services Innovation: Rethinking Your Business to Grow and Compete in a New Era**,

Dorothy Leonard, **Capacidades empresariales para la innovación. Su gestión**, Ed. Cotec.,

P.J. Fellows., **Food Processing Technology**, Cambridge, England. Woodhead Publishing Limited y CRC Press LLC,

Plan Galego de Investigación, Innovación e Crecemento,

Complementary Bibliography

Corcoran, Elizabeth, **Redesigning Research**, Scientific American,

Henry Chesbrough, **Open Business Models: How to Thrive in the New Innovation Landscape**,

Badaway. M.K, **Temas de gestión de la innovación para científicos e ingenieros**, Fundación COTEC,

Alan West, **Estrategia de Innovación**,

Aberdeen, **The Product Innovation Agenda Benchmark Report**,

Robert G. Cooper, **The seven principles of the latest Stage-Gate® method add up to a streamlined,**

Plan Nacional de I+D+i, **Programa de Trabajo 2011.**,

PTEPA, **Mapa de ayudas en el sector pesquero y acuicola**,

PTEPA, **Competencias en I+D+i pesquera y acuicola.**,

A. G. Gaonkar., **Food Processing: Recent developments**, Elsevier Science & Technology Books,

T. Ohlsson y N. Bengtsson., **Minimal processing technologies in the food industry**, Cambridge, England. Woodhead Publishing Limited,

G.V. Barbosa-Cánovas, M.M. Góngora Nieto, U.R. Pothakamury and B.G. Swanson., **Preservation of foods with pulsed electric fields**, San Diego, USA. Academic Press.,

M. Shafiur Rahman., **Handbook of food preservation**, Boca Raton, USA. CRC Press LLC.,

Da-Wen Sun., **Emerging technologies for food processing**, Food science and Technology, International Series. Elsevier Academic Press,

www.micinn.es,

www.cdti.es,

www.cordis.europe.eu,

www.cotec.es,

Recommendations

Other comments

In case of discrepancies, the Spanish version of this guide will prevail.