

CFA2.4 Course Title: New trends in seafood processing and conservation

Modality: Advance Training Course

Dates:

26-30 June 2018

Duration:

Lectures: 20h

Laboratory: 0h

Location:

DOMAR Videoconference room. Torre CACTI-CITEXVI building. Campus As Lagoas-Marcosende. Universidade de Vigo

Academic coordinators:

Name	Institution	e-mail
Lorenzo Pastrana	INL: International Iberian Nanotechnology Laboratory/Universidade de Vigo	pastrana@uvigo.es
Jose A. Teixeira	Universidade de Minho	jateixeira@deb.uminho.pt

Lecturers:

Name	Institution	e-mail
Pablo Fuciños	INL	Pablo.fucinos@inl.int
Miguel Cerqueira	INL	Miguel.cerqueira@inl.int
Isabel R. Amado	UVIGO	sabelara@uvigo.es

General description:

The course presents the application of new processing technologies (high hydrostatic pressures, ohmic heating, pulses of light, radiation, etc.) and conservation (active packaging) to seafood. The course will try to move away from academicism to focus on the perspective of industrial reality and the market through the selection of teachers among the departments of production, quality and R & D of the main seafood processing companies or suppliers of processing and conservation technology. . The professors will present the technologies to those currently in use and those alternatives that allow adapting to the new market trends both to extend the shelf life of fresh and refrigerated products and increase their quality and safety, as well as to make processes more efficient, develop new foods and obtain new ingredients and biomolecules with improved or functional qualities (particularly in relation to health).

Contents:

The program is structured in three modules that are:

1. Introduction to the technologies of processing of food of marine origin
2. New processing technologies
 - a. Thermal technologies
 - b. Non-thermal technologies
3. Advanced packaging and preservation systems
 - a. Refrigeration of fish. Adjuvant methods
 - b. Freezing of fish. Defrosting Methods
 - c. Packaging in modified atmospheres

Teaching methodologies:

The sessions, which will be taught in Spanish, Portuguese or English, will be of three types:

- Face-to-face lectures (or by videoconference) taught mainly by professors external to the Campus del Mar and from related companies and industries. They will be based on a specific theme of the syllabus of the subject. They will be carried out through power point presentations and the participation of the students will be encouraged in discussions about the advantages and applications of the technologies that will be presented
- Tutored work proposed by the teacher so that the students execute in order to exercise the theoretical knowledge taught in the classroom. In general, bibliographic or information search exercises will be proposed in which the student is expected to face practical cases and analyze them with a critical vision.
- Broad breaks are planned for coffee and meals that should be used by students to establish informal contacts with the teacher and their classmates

Evaluation system:

For the evaluation and the final qualification, the following will be taken into account:

- Attendance to class: 70%
- Satisfactory completion of the proposed tutored works: 30%

Brief CV of the lecturers:

Prof. Lorenzo Pastrana is the Head of the Life Sciences Department at INL. Formerly, he was Professor of Food Science at the University of Vigo and Director of Knowledge Transfer at the same University. He has led the FP7 BiValBi project and other international public research projects and research contracts with industry. He has a wide expertise in food nano and biotechnology and has authored more than one hundred peer-reviewed publications, patents and book-chapters.

Dr. Pablo Fuciños is specialist in bionanotechnology with more than 30 published papers.

Dr. Miguel Cerqueira is a researcher specialized in food science and technology and till now published more than 55 papers.

Dr. Isabel R Amado is a Marie Curie fellowsea specialized in valorization of sea food wastes with more than 30 published papers