

## Training programme on specialisation courses

LIFELONG LEARNING COURSES





The main objective of this Training Programme is to combine access to research infrastructure, analytical or sampling methods, and other procedures with a training offer on how to use them or to learning new skills and share best practices (job shadowing).

#### Take part in this new programme and:



Access a larger offer of equipment and facilities as well as courses.



Acquire specialised knowledge.



Expand your network with specialists from your area of interest or research.



Experience another culture and perpective.

#### Who can take this training?

- Bachelor, Master or PhD students
- Professors
- Researchers
- University staff related with research
- Professionals in the private or public sector

Check the academic background and prefered knowledge on each course prerequisites.

Members of the alliance EU-CONEXUS RFS are eligible to get financial support.

#### How to apply?

In order to register for the course/courses, all you need to do is to consult this catalogue, and send an email to the address and contact details provided under each course to register. Specify the most suitable dates and check availability with the trainer.



## Analyte extraction and quantification from marine samples via spectroscopic techniques

CATHOLIC UNIVERSITY OF VALENCIA, SPAIN

Hours	ECTS	Mode	Cost	Contact
24 hrs.	3 ECTS	On site	350 €	imedmar@ucv.es

#### Course description:

- Basic concepts of analytical chemistry
- · Sample preservation and pretreatment methods
- Analyte extraction
- Fundamentals of spectroscopy
- Data processing

#### Learning outcomes:

- Treatment and preservation of environmental samples
- Extract and determine analytes of interest
- Process results and apply statistics

#### **Prerequisites:**

Bachelor's degree in Biotechnology, Biology, Biochemistry or other similar fields. Any professional who works or has proven experience in the area in which they wish to take the course.



### Scuba diving for scientific research in coastal waters

CATHOLIC UNIVERSITY OF VALENCIA, SPAIN

Hours	<b>ECTS</b>	Mode	Cost	Contact
24 hrs.	3 ECTS	On site	300 €	imedmar@ucv.es

#### Course description:

- Sampling and Diving Techniques in Oceanography
- Sampling and Diving Techniques in Marine Biology
- Scuba diving and oceanographic equipment: maintenance and care
- Planification of Oceanographic Expeditions in Hyperbaric environment
- Dive sampling practice in Posidonia oceanica meadows

#### Learning outcomes:

- Skills to apply specific techniques for scientific diving in infralittoral biocenoses: rocky bottoms, seagrasses and sedimentary benthos
- Acquire capacity for the planning and organization of sampling campaigns

#### **Prerequisites:**

Bachelor's degree in Marine Science, Oceanography, Environmental Science, Biology. Advanced scuba diving qualification and diving experience.



## Techniques for the maintenance in captivity of Pinnidae (Bivalves)

#### CATHOLIC UNIVERSITY OF VALENCIA, SPAIN

Hours	ECTS	Mode	Cost	Contact
24 hrs.	3 ECTS	On site	250 €	imedmar@ucv.es

#### Course description:

- Biology of Bivalves and protected species
- RAS: Recirculating aquaculture systems for bivalve maintenance
- Feed production, maintenance and control of parameters in captivity
- Experiment set-up for bivalve species of interest

#### Learning outcomes:

- Knowledge of the biology of bivalves and their particularities for maintenance in captivity
- Competence to control the main aspects of water quality and feeding of filter-feeding bivalves in aquariums
- Skills for planning scientific experiments with bivalves in captivity

#### **Prerequisites:**

Bachelor's degree in Marine Science, Oceanography, Environmental Science, Biology or similar.



## Environmental scanning electron microscopy and associated techniques (EDS, EBSD)

#### LA ROCHELLE UNIVERSITÉ, FRANCE

Hours	ECTS	Mode	Cost	Contact
15 hrs.		Blended	247 €	egle.conforto@univ-lr.fr virginia.kolb@univ-lr.fr

#### Course description:

- Environmental Scanning Electron Microscopy (ESEM): Introduction, applications, samples analysis, architecture
- Energy Dispersive Spectroscopy analysis
- Electron Backscatter Diffraction (EBSD): "In-situ" deformation tests and crystallographic information

#### Learning outcomes:

- Knowledge of the optics, architecture, parameters choices, operation, basic settings of transmission (TEM), scanning (SEM) electron microscopes
- Understand the choice of analysis parameters depending on the type of sample and its surface finishing
- Interpretate images of secondary electrons and backscattered electrons
- Know the principle of obtaining an EDS spectrum and its quantification and an EDS map from elementary analysis

#### **Prerequisites:**

Bachelor's degree in scientific field such as a degree in Physics, Chemistry or Materials. Any professional who works or has proven experience in the area in which they wish to take the course.



## Applications of gas chromatography for the determination of fatty acids in fish and fish feed

#### AGRICULTURAL UNIVERSITY OF ATHENS, GREECE

Hours	ECTS	Mode	Cost	Contact
32,5 hrs.	1.3 ECTS	Blended	100 €	echatzoglou@aua.gr

#### Course description:

- Folch extraction: which combines chloroform and methanol, to isolate lipids from tissues
- Esterification: Fatty acids can be converted into fatty acid methyl esters (FAMEs) using reagents like boron trifluoride (BF3) in methanol
- Gas chromatography: FAMEs can then be quantitatively analyzed using techniques such as capillary gas chromatography (GC) with the help of internal standards

#### Learning outcomes:

- Understanding the significance of fatty acids in fish
- Introduction to the commonly used methods for analyzing fish fatty acid composition
- · Awareness of the importance of fatty acids nutritional value

#### **Prerequisites:**

Bachelor's degree in Marine Science, Oceanography, Animal Science, Life Sciences, Biotechnology, Biology, biochemistry an other Applied Sciences, Veterianary Sciences, School teachers in natural sciences.



#### Fish feed and seafood quality control

#### AGRICULTURAL UNIVERSITY OF ATHENS, GREECE

Hours	ECTS	Mode	Cost	Contact
50 hrs.	2 ECTS	Blended	150 €	echatzoglou@aua.gr

#### Course description:

Introduction to Proximate composition analysis for assessing the quality, nutritional value, energy content, product development, and food safety aspects of fish and fish feed.

- · Determination of moisture content
- · Determination of ash content
- · Determination of protein content
- · Determination of fat content

#### **Learning outcomes:**

- Understanding the Importance of Proximate Composition in assessing fish feed and fish quality
- Familiarize with Analytical Techniques used to determine the proximate composition of fish feed and fish samples.
- Interpretation of proximate composition analysis results and understanding the implications of different values for moisture, protein, fat, and ash contents

#### **Prerequisites:**

Bachelor's degree in Marine Science, Oceanography, Animal Science, Life Sciences, Biotechnology, Biology, biochemistry an other Applied Sciences, Veterinary Sciences, School teachers in natural sciences.



## Applications of molecular biology in fisheries and aquaculture

AGRICULTURAL UNIVERSITY OF ATHENS, GREECE

Hours	ECTS	Mode	Cost	Contact
50 hrs.	2 ECTS	Blended	200 €	echatzoglou@aua.gr

#### Course description:

- DNA extraction
- Gel electrophoresis
- Polymerase Chain Reaction (PCR)
- Real time PCR (qPCR)

#### Learning outcomes:

Solid understanding of fundamental molecular biology concepts, including:

- DNA structure, extraction
- gene expression
- · genetic variation
- molecular techniques used in fisheries and aquaculture research

#### **Prerequisites:**

Bachelor's degree in Marine Science, Oceanography, Animal Science, Life Sciences, Biotechnology, Biology, biochemistry an other Applied Sciences, Veterianary Sciences, School teachers in natural sciences.



## Preparation of corruption prevention programs and plans

KLAIPEDA UNIVERSITY, LITHUANIA

Hours	ECTS	Mode	Cost	Contact
8 hrs.	2 ECTS	Blended	500 €	jaroslav.dvorak@ku.lt

#### Course description:

- Performing an analysis of the current situation. Hierarchy of corruption prevention programs. Performing an environmental analysis in the preparation of the corruption prevention program. Determining the goals, tasks, and desired results of the program
- Planning of corruption prevention measures
- The relationship between the preparation of corruption prevention programs and plans and strategic planning. Logical program model

#### Learning outcomes:

- To reveal the steps for determining the goals, objectives and desired results of the corruption prevention program. Having familiarized himself with the theoretical and practical foundations
- Deepen knowledge about the main methods and methods of developing corruption prevention programs, plans, and evaluation of program effectiveness
- To provide special skills and motivation to solve the problems of preparation and implementation of corruption prevention programs and plans

#### **Prerequisites:**

Studying a bachelor degree of any field.



#### Underwater cultural heritage as a tourist

#### UNIVERSITY OF ZADAR, CROATIA

Hours	ECTS	Mode	Cost	Contact
40 hrs.		Online or On site	350€ on site 100€ online	irradic@unizd.hr

#### Course description:

- Underwater cultural heritage definition, typology, state of preservation
- · Best practices in the Mediterranean and best practices in the world
- Tentative selection of the underwater cultural heritage sites for underwater and on land presentation
- Tentative business plan for the underwater cultural heritage site presentation

#### Learning outcomes:

- Understanding the importance of the underwater cultural heritage
- Knowledge on typology of the underwater cultural heritage sites, and the possibilities of their presentation to general public
- Ability to select the sites for the underwater and on land presentation
- Ability to elaborate a tentative business plan for the underwater cultural heritage site presentation

#### **Prerequisites:**

Studying a bachelor degree of any field.



#### Lexicology and lexicography

UNIVERSITY OF ZADAR, CROATIA

Hours	ECTS	Mode	Cost	Contact
8-12 hrs.		Online or On site	150€	bvodanov@unizd.hr

#### Course description:

- Basic concepts on defining word or word compounds
- Transfer of meaning (polysemy and metaphors)
- Differentiation between lexeme and term (as in LSP)
- How to manipulate dictionnary and types of dictionnaries
- How to translate or adapt specific term/lexeme or compound

#### Learning outcomes:

- Ability to identify and define word as simple or compoud structure
- To recognise and explain the transfer of meaning and differentiate genetal and specific term
- To manipulate different types of doctionnaries and language corpora
- Understanding the proces of adaptation or equivalence in translation

#### **Prerequisites:**

Graduate students and Bachelor degree in Philology or Humanities and Computional sciences.



## Basic surveying and cadastral concepts complementary to legal property registration

TECHNICAL UNIVERSITY OF CIVIL ENGINEERING OF BUCHAREST, ROMANIA

Hours	ECTS	Mode	Cost	Contact
140 hrs.	14 ECTS	Online Blended	300€	ana.badea@utcb.ro

#### Course description:

- · Basic surveying concepts and topographic elements
- Instruments used for topographic surveys (theodolites, total stations, GPS, laser scanner, geometric leveling instruments, digital levels)
- Scales and use of maps
- Absolute coordinates and relative coordinates

#### Learning outcomes:

- Knowledge of the essential basic elements in topography, cadastre
- Processing of UAV images for cadastral purposes
- Management of dedicated geospatial data in GIS
- Using online open data geoportals

#### **Prerequisites:**

Bachelor's degree in Real Estate Law, Cadastre, Surveying, Civil Engineering, Geographic Information Systems, Geography, Land Planning.



#### Surveying, cadastre and GIS in the oil domain

TECHNICAL UNIVERSITY OF CIVIL ENGINEERING OF BUCHAREST, ROMANIA

Hours	ECTS	Mode	Cost	Contact
120 hrs.	12 ECTS	Online Blended	330 €	ana.badea@utcb.ro

#### Course description:

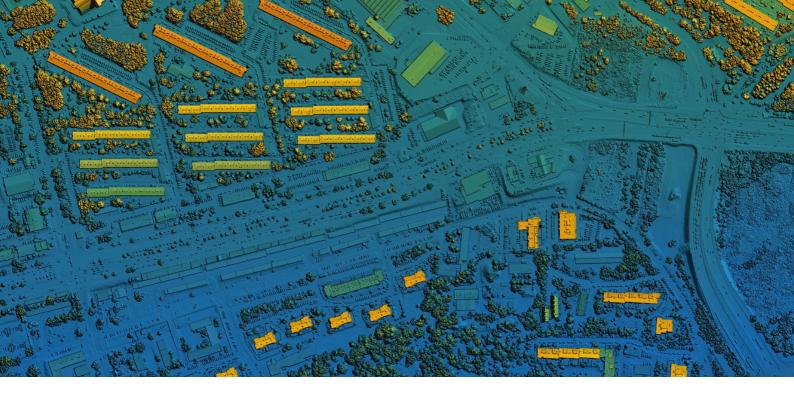
- Cadastre and Surveying basic concepts. Sporadic cadastre and systematic cadastre.
- National Infrastructure for Spatial Information (INIS)
- Case studies: first registration, update of technical information, parcel plan, plan of framing in the field, topographical support for construction authorization
- E-Terra3 and other geoportals
- Authorization regulation, types of authorizations
- Changing projections in ArcGIS. Using common tools in ArcGIS
- Creating a database structure, populating it with data

#### Learning outcomes:

- Knowledge of the basic elements in surveying and cadastre for the oil domain
- Processing of UAV images for oil site inspection
- Management of dedicated geospatial data in GIS
- Applying GIS concepts for managing geospatial data for the oil domain

#### **Prerequisites:**

Bachelor's degree in Geology, Geography, Mining, Oil, Cadastre, Surveying.



## Acquisition, processing and representation of spatial data using modern surveying instruments

TECHNICAL UNIVERSITY OF CIVIL ENGINEERING OF BUCHAREST, ROMANIA

Hours	ECTS	Mode	Cost	Contact
24 hrs.	3 ECTS	On site	250 €	caius.didulescu@utcb.ro

#### Course description:

- Theoretical and applied notions of modern geodesy
- Positioning (3D)
- Developing skills with applicability in the activities that require the acquisition and processing of spatial data

#### Learning outcomes:

- Terrestrial sensors in the acquisition of planimetric data
- Terrestrial sensors in leveling data acquisition
- Acquisition of spatial data using the laser scanner
- Acquisition of spatial data using satellite navigation, measurement and positioning systems

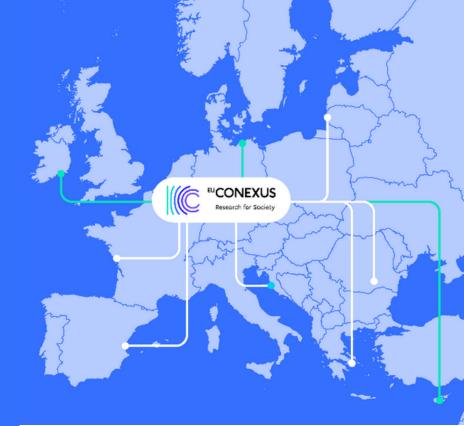
#### **Prerequisites:**

Bachelor's degree in scientific field such as Terrestrial Measurements, Cadastre, Surveying, Cartography.

EU-CONEXUS RFS supports challenge-based and interdisciplinary research collaboration across countries for developing science and innovation into a:

Hub of excellence on smart urban coastal sustainability

Creating an attractive career environment for our students.



#### N-1

RESEARCH FOR SOCIETY has helped turn the EU-CONEXUS research approach into a fully-fledged university service, equally covering research, education, and societal needs.

#### N-2

RFS researchers actively invite partnerships with coastal industries, businesses, and society actors to ensure the transfer of knowledge and the improvement of quality of life in and around coastal areas.

#### N-3

Across the nine EU-CONEXUS partner institutions, our researchers have been developing science and innovation into a hub of excellence on smart urban coastal sustainability, and in the process, creating an attractive career environment for our students.

# Developing innovative solutions for Smart Urban Coastal Sustainability

Explore more of EU-CONEXUS RFS



www.eu-conexus.eu/en/rfs/