

COURSE LAYOUT

1. GENERAL

SCHOOL		School of Animal Sciences		
DEPARTMENT		Department of Animal Science		
STUDY LEVEL		Undergraduate (Elective)		
COURSE CODE		0296	SEMESTER	5 th
COURSE TITLE		Fisheries Biology and Management		
INDEPENDENT TEACHING ACTIVITIES			ΕΒΔΟΜΑΔΙΑΙΕΣ ΩΡΕΣ ΔΙΔΑΣΚΑΛΙΑΣ	ΠΙΣΤΩΤΙΚΕΣ ΜΟΝΑΔΕΣ
		Lectures	3	3
COURSE TYPE (Foundation course, General knowledge, Scientific area, Developing skills)		SCIENTIFIC AREA DEVELOPING SKILLS		
PREREQUISITES		OXI		
LANGUAGE		GREEK		
IS THE COURSE OFFERED for ERASMUS STUDENTS?		NO		
ΗΛΕΚΤΡΟΝΙΚΗ ΣΕΛΙΔΑ ΜΑΘΗΜΑΤΟΣ (URL)		XXX		

2. LEARNING OUTCOMES

Learning Outcomes
<p>Learning Skills</p> <p>Knowledge about the age and growth, reproduction, ecology and dynamics of fish and the management of their stocks.</p> <p>Familiarity with sampling techniques for measurements of the external morphology of fish and analysing morphometric relationships, preparations for age reading and determination of the fertility of fish, applying statistical and other methods to estimate parameters of growth, mortality and species population dynamics. Handling of the largest fish database, FishBase (www.fishbase.org), and its use for species identification, ecology, population dynamics and management of their stocks.</p>
General Competences

- Application of knowledge in practice
- Search, analysis and synthesis of data and information, using the necessary technologies
- Adaptation to new situations
- Decision making process
- Autonomous work
- Teamwork
- Generation of new research ideas
- Respect for the natural environment
- Promotion of free, creative and inductive thinking

3. COURSE CONTENT

1. Basic concepts of stock

2. Fishing gears and selectivity

- Sampling without fishing gears
- Sampling with fishing gears
- Selectivity of fishing gears
- Effectiveness of fishing gears

3. Production processes and fisheries resources

- Primary production
- Heterotrophic production
- Fishery production
- Main species caught
- Fishing areas
- Climate and fish stocks

4. Fisheries categories and fishing effort

- Fishery production and effort
- Catches = landings + discards
- Target species, bycatch and unintentional catch
- Ghost fishing
- Fishing effort and indicators
- Maximum Sustainable Yield (MSY)

5. The effect of fisheries

- The impact of fisheries on commercial stocks and bycatch
- Impact of fisheries on non-fished organisms
- The effect of non-targeted organisms on fisheries
- The effect of fisheries on the ecosystem
- Selective or balanced exploitation?
- Fisheries and aquaculture
- Good environmental status

6. Age

- Age determination
- Validity of age determination – methods
- Recursive calculation
- Age-length key
- Longevity

7. Growth

- Length-weight ratio
- Condition
- What is a growth?
- Growth models
- Growth parameter estimation methods

8. Mortality

- Types of mortality
- Numerical expression of mortality
- Total mortality estimation methods
- Natural instantaneous mortality estimation methods
- Fisheries instantaneous mortality and exploitation rate

9. Reproduction

- Gender ratio
- Season (start and duration) of reproduction
- Stages of genital maturation
- First genital maturation
- Age of first maturity
- Fertility

10. Nutrition

- Diet composition
- Fractional trophic level
- Trophic level and uses

11. Assessment and management of fish stocks

- Maximum Sustainable Yield (MSY)
- Assessment methods (monospecific, multispecific, ecosystemic)
- Fisheries models (age based, surplus production)
- Fisheries policy (CFP, MSFD)

4. TEACHING and LEARNING METHODS - Evaluation

TEACHING METHOD	Face to face (theory-laboratory) and remote support via email	
USE OF INFORMATICS and COMMUNICATION TECHNOLOGIES	PowerPoint Presentations Use of e-class platform Students' support via e-mail	
ΟΡΓΑΝΩΣΗ ΔΙΔΑΣΚΑΛΙΑΣ	Activities	Workload per semester
	Lectures	26
	Laboratory practices	13
	Individual assignment	11

	Total	50
STUDENTS EVALUATION	Written exams (100%)	

5. LITERATURE

Προτεινόμενη βιβλιογραφία

ΣΤΕΡΓΙΟΥ Κ.Ι., Α.Χ. ΤΣΙΚΛΗΡΑΣ. 2016. Αλιευτική βιολογία και Αλιεία. ΣΥΝΔΕΣΜΟΣ ΕΛΛΗΝΙΚΩΝ ΑΚΑΔΗΜΑΙΚΩΝ ΒΙΒΛΙΟΘΗΚΩΝ.

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