

COASTAL AND MARINE BIOLOGY AND ECOLOGY (LM51)

(Lecce - Università degli Studi)

Teaching ENVIRONMENTAL PHYSIOLOGY

GenCod A002335

Owner professor Maria Giulia LIONETTO

Teaching in italian ENVIRONMENTAL PHYSIOLOGY

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SSD code BIO/09

Reference course COASTAL AND MARINE BIOLOGY AND ECOLOGY

Course type Laurea Magistrale

Credits 6.0

Teaching hours Ore-Attività-frontale: 52.0

For enrolled in 2016/2017

Taught in 2017/2018

Course year 2

Language INGLESE

Curriculum PERCORSO COMUNE

Location Lecce

Semester Primo-Semestre

Exam type Orale

Assessment Voto-Finale

Course timetable

<https://easyroom.unisalento.it/Orario>

BRIEF COURSE DESCRIPTION

Internal environment and external environment
Physiological responses to environmental variability.
Conformists and regulators
Homeostasis
Range of tolerance and resistance
Adaptation and acclimatization
Temperature limits for living organisms, adaptations to extreme temperatures
Heat exchanges between the organism and the external environment
Determinants of body heat
Endothermic and ectothermic organisms
Thermal homeostasis
Water exchanges between the organism and the external environment
Osmoregulation in aquatic environments.
Osmoregulation in terrestrial environments
Gas exchange between the organism and the environment
Respiration in aquatic and terrestrial environments
Principles of environmental toxicology: the organism physiological responses to chemical pollutants, detoxification mechanisms
Endocrine disruptors
Toxicity testing
Biomarkers and their application in environmental biomonitoring
Electromagnetic field effects on the physiology of animal organisms.

REQUIREMENTS

basic knowledge of general physiology

COURSE AIMS

The objective of the course is to provide students the basic knowledge of the environmental physiology (physiological responses to the variability of the environmental factors), and to gain a sound background in the physiological responses of animals to environmental pollutants and in their application in the ecotoxicological monitoring.

ASSESSMENT TYPE oral examination

OTHER USEFUL INFORMATION Calendario attività didattiche: <http://www.scienzemfn.unisalento.it/540>

REFERENCE TEXT BOOKS - P. Willmer, G. Stone, I. Johnston. Environmental Physiology of Animals. Blackwell Publishing
-W.C.H. Hopkin, S.P.Sibly, R.M. Peakall. Principles of Ecotoxicology. Taylor and Francis