UNIVERSITÀ DEGLI STUDI DI PALERMO

Department: null

A.Y. 2009/2010

DEGREE COURSE IN NATURE SCIENCES

- INLAND WATERS ECOLOGY -

Characteristics

Class of Master's Degree (MSc) on Natural sciences (LM-60)	2 YEARS		FREE ACCESS	2056

Educational objectives

This 2nd cycle degree course is characterised by a manifest interdisciplinarity.
It is, in fact, one of the natural opportunities for graduates of the class L 32 - Science and Technology for the environment and nature,-also interdisciplinary in its articulation.
The course aims at deepening the knowledge acquired during the 1st cycle of three years and aims at training graduates possessing a thorough knowledge of structural and functional components of ecosystems, in current as well as in past environments, and outline the conceptual tools aimed at the environmental conservation, defense and management.
Adequate knowledge will be also provided for the analysis of biodiversity at various levels of organisation (from the genetic one to specific and environmental ones),as well as competences to evaluate ecosystems.
The course might be articulated in various curricula, described in the educational Regulations, in order to address the various aspects of the evolution of ecosystems.
Among the areas which are investigated in depth, it is worth mentioning: the analysis, management and conservation of natural environments through the acquisition of the theoretical principles and modern technologies for the analysis of environment; the systemic analysis of recent past natural environments, and namely of its evolutionist and anthropological dimension; the study and analysis of continental water ecosystems in a way to conjugate the exploitation of water resources with the defence and conservation of the biological heritage, in accordance with EU directives and with the requirements of the local agencies for land management.
The educational programme will be integrated with laboratory activities, stages and practice periods, also within public institutions and private facilities, as well as with field experimentation, through multi- and interdisciplinary educational trips.
At the end of the course, graduates will have acquired advanced knowledge with respect to the study of biotic and abiotic components of ecosystems, to the conservation of these latter, to the management techniques for land and for the processes affecting the quality of the environment and the conservation of biodiversity.

Professional opportunities

Graduates of this course may find professional opportunities:
In the public sector, in:
- universities and research institutes;
- environmental management and services companies;
- ministries, local administrations and other public bodies;
- National and Regional Agencies for Environment Protection;
- Institute of Health;
- Experimental Stations;
- Archaeological Superintendence.

In the private sector graduates might carry out their activities in different types of businesses and professional firms dealing with environmental issues.
The educational programme prepares to further pathways provided by law for the training of teachers of science subjects in different school levels.
Additional areas of employment are:
- Activities within museum or natural science museums;
- Science communication and journalism;

- Design of parks and park plans;
- Management of protected areas

Final examination features

It consists of the discussion of an original experimental or theoretical research project, which will be awarded with 30 credits. The research work should be carried out during the internship in a public or private research laboratory; it should be prepared by the student under the guidance of a supervising Professor and possibly a correlator. Students should also produce a written paper and/or other form of communication adequate to the research, indicating clearly the studied issue, the experimental approach used, the results obtained and the critical discussion of these latter. Students should be able to discuss the content during the final exam of their Course. The Course Board regulates the criteria for assigning an appropriate mark to the quality of work done, taking into account the coherence between expected learning outcomes and objectives achieved throughout the curriculum.

Subjects 1 ° year	CFU	Sem.	Val.	SSD	TAF
14052 - CONSERVATION OF NATURE *Chemello(PO)*	6	Ann.	V	BIO/07	C
14051 - STATISTICS FOR EXPERIMENTAL RESEARCH *Bono(PA)*	6	Ann.	V	SECS-S/02	B
14523 - ZOOGEOGRAPHY AND ECOLOGY - INTEGRATED COURSE	9	Ann.	V		
- ANIMAL ECOLOGY *Sara'(PA)*	*6*	*Ann.*		*BIO/07*	*B*
- ZOOGEOGRAPHY *Sara'(PA)*	*3*	*Ann.*		*BIO/05*	*B*
14059 - EVOLUTIONARY BIOLOGY - INTEGRATED COURSE	9	Ann.	V		
- APPLIED BIOTECHNOLOGIES *Carra(RU)*	*3*	*Ann.*		*BIO/06*	*B*
- EVOLUTIONARY BIOLOGY OF VERTEBRATES *Roccheri(CU)*	*3*	*Ann.*		*BIO/06*	*B*
- PHYSIOLOGY OF EVOLUTION *Montalbano(PQ)*	*3*	*Ann.*		*BIO/09*	*B*
14064 - GEOLOGY AND ENVIRONMENTAL GEOCHEMISTRY - INTEGRATED COURSE	12	Ann.	V		
- ENVIRONMENTAL GEOCHEMISTRY *Parello(PO)*	*6*	*Ann.*		*GEO/08*	*B*
- ENVIRONMENTAL GEOLOGY *Agnesi(PQ)*	*6*	*Ann.*		*GEO/04*	*C*
05660 - PAEDOLOGY *Palermo(AR)*	6	Ann.	V	AGR/14	B
	48				

Subjects 2 ° year	CFU	Sem.	Val.	SSD	TAF
03784 - HYDRO-GEOCHEMISTRY *Parello(PO)*	6	Ann.	V	GEO/08	B
14066 - PLANT ECOLOGY - INTEGRATED COURSE	6	Ann.	V		
- PLANT ECOLOGY 1 *Sajeva(PA)*	*3*	*Ann.*		*BIO/03*	*B*
- PLANT ECOLOGY 2 *Naselli Flores(PA)*	*3*	*Ann.*		*BIO/03*	*B*
10999 - SYSTEMATIC BIOLOGY OF ALGAE *Barone(PA)*	6	Ann.	V	BIO/02	B
03781 - HYDROBIOLOGY *Naselli Flores(PA)*	6	Ann.	V	BIO/07	B
05917 - FINAL EXAMINATION	30	Ann.	G		E
Stage and others	6				F
Free subjects	12				D
	72				

Legenda: Per. = periodo o semestre, Val. = Valutazione (V=voto, G=giudizio), TAF= Tipologia Attività Formativa (A=base, B=caratterizzante, C=Affine, S=stages, D=a scelta, F=altre)

OPTIONAL SUBJECTS

Stage and others	CFU	Sem.	Val.	SSD	TAF
13121 - PRACTICE	6	Ann.	G		F

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