UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione
ACADEMIC YEAR	2016/2017
MASTER'S DEGREE (MSC)	PRIMARY EDUCATION
SUBJECT	ZOOLOGY FOR PRIMARY AND CHILDREN SCHOOL WITH WORKSHOP
TYPE OF EDUCATIONAL ACTIVITY	B
AMBIT	70009-Discipline biologiche ed ecologiche
CODE	17155
SCIENTIFIC SECTOR(S)	BIO/05
HEAD PROFESSOR(S)	PARRINELLO DANIELA Professore Associato Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	7
INDIVIDUAL STUDY (Hrs)	119
COURSE ACTIVITY (Hrs)	56
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	3
TERM (SEMESTER)	2° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	**PARRINELLO DANIELA** Monday 09:30 11:30 Dipartimento di Scienze della Terra e del Mare (DiSTeM) Ed. 16 Viale delle Scienze piano seminterrato -1.Si prega di prenotarsi al ricevimento tramite mail daniela.parrinello@unipa.it Thursday 09:30 11:30 Dipartimento di Scienze della Terra e del Mare (DiSTeM) Ed. 16 Viale delle Scienze piano seminterrato -1.Si prega di prenotarsi al ricevimento tramite mail daniela.parrinello@unipa.it

DOCENTE: Prof.ssa DANIELA PARRINELLO

PREREQUISITES	Biology basic knowledge according to the programs of the secondary school
LEARNING OUTCOMES	Knowledge and ability to understand Theoretical lessons: Knowledge of zoology to provide a solid knowledge on which the teacher can develop and build educational paths consistent with the kindergarten and elementary school. That involves the skills required on the levels of animal organization and their interactions with the environment. Learning is achieved through the study of the basic mechanisms and their decisive significance in the charcter inheritance that affect the main functions of organs and systems. In this context, it is pivotal the study of the main phyla and related taxa examined through some model species. The methods of study and the specific language of the discipline will be attained. The knowledge, supplemented by teaching expertise on the fundamental animal biology, will perform the capacity to prepare and plan training goals. The tools for implementing education experiences will be gained. Capacity to apply knowledge and understanding The achieved knowledge enables the understanding of the educational and educational value of animal biology in a social context that more and more requires the conscious knowledge of the biological phenomena and their applications. Making judgments The theoretical knowledge and laboratory expertise must lead to the achievement of capacity of analysis and synthesis for the interaction with other disciplines and the formation of an ethical thought. Enable communication The achieved specific technical language and ability will allow to expose and transpose knowledge on animal biodiversity and nature conservation principles, stimulating and developing the skills analysis. The pedagogical importance of the animal world and the scientific method will be magnified highlighting the educational aspects. Capacity Learning Stand-alone update by consulting the journals and media tools on animal sciences field. The knowledge gained during the course will allow to attend workshops and specialized seminaries on teaching by using animal biology as an educational tool. Finally, the access to Masters will be allowed.
ASSESSMENT METHODS	Written test (multiple choice, true / false). The test tends to verify the skills and knowledge relating to the field specification of the course. It consists of 20 questions, each of which is accompanied by two or more closed answers. The skills and knowledge are estimated through the choice of / the exact answers chosen among those offered to every question. The closure of the response will allow the examiner to determine in advance the score to be assigned to each question depending on the answer: correct, wrong or omitted. The correct answer is evaluated with a score of 1.50; that wrong with the score -0.50; failure to reply with a score of 0. Duration of test: 60 minutes. The candidate may require an oral integration if he/she has achieved a minimum score of 25.The final grade will be the weighted average between the written essay (including the evaluation of the possible interview) and the score awarded following the evaluation by the Tutor who led the laboratory according to the subject content of the experimental project on primary school and kindergarten.
EDUCATIONAL OBJECTIVES	OBJECTIVES To know how the field of zoology allows the teaher to: 1. Elicit attitudes and curiosity stimulating the search for explanations of biological phenomena 2. Examine such phenomena with a scientific approach and developing the independent ability to raise questions and personal assumptions 3. Detect similarities and differences through the application of qualitative and quantitative methods relevant the educational level required.
TEACHING METHODS	Lessons (6 cfu) and laboratory expertise (1 cfu)
SUGGESTED BIBLIOGRAPHY	Solomon-Berg-Martin –Fondamenti di Biologia- EdiSES III edizione (numero di pagine 270) De Bernardi et al. –Zoologia parte generale- IDELSON-GNOCCHI (numero di pag. 180) CD-ROM a cura del docente

SYLLABUS

Hrs	Frontal teaching
6	The animal cells: structures and functions

SYLLABUS

Hrs	Frontal teaching
6	Chromosomes: structure and function. The cell cycle, mitosis, meiosis
5	Basics of genetic
1	Unicellular eukaryotes: Protozoans
9	Morpho-functional levels in the increasing complexity of invertebrates and vertebrates
4	Asexual and sexual reproduction, gametogenesis, models of embryonic and post-embryonic development of invertebrates and vertebrates
3	Genealogy and animal phylogenesis. Classification and relationships. Genesis of biodiversity.
5	The fundamentals of animal systematic (invertebrates and vertebrates)

Hrs	Workshops
8	Exploring invertebrate models
8	Didactic applications of animal models as educational tools. Production of didactic units.