

| General information | |
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| Academic subject | Zoology As part of the Integrated Course (C.I.) in Biology (6 ECTS in total) |
| Degree course | Veterinary Medicine |
| Academic Year | 2021-2022 |
| European Credit Transfer and Accumulation System (ECTS) | 4 |
| Language | Italian |
| Academic calendar (starting and ending date) | I Bimester |
| Attendance | Mandatory |

| Professor/ Lecturer | |
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| Name and Surname | Caterina Longo |
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| Telephone | 080 5443357 |
| Department and address | Veterinary Medicine Campus – Valenzano (BA) |
| Virtual headquarters | Microsoft Teams code: |
| Tutoring (time and day) | From Monday to Friday from 11:30 to 13:30 exclusively by appointment via email |

| Syllabus | |
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| Learning Objectives | The course aims to provide students with knowledge relating to the fundamental principles of animal biology aimed at the study and identification of the main animal taxa. |
| Course prerequisites | Basic knowledge of animal biology acquired at secondary level studies will facilitate the understanding of many covered topics. |
| Contents | <p>The contents of the teaching program of the Zoology module of the C.I. of Biology related to the area of Basic Sciences are:</p> <p>Introduction Characteristics of living organisms. Division into Kingdoms. Definition of animal. The cell, life, the main classes of organic macromolecules.</p> <p>Fundamental principles of animal life The animal cell: evolution, organization and functioning. Mitosis and meiosis. Mendel's fundamental principles of inheritance. DNA and RNA: transcription of DNA and translation of genetic information (protein synthesis).</p> <p>Reproduction and development Asexual and sexual reproduction. Hermaphroditism and gonochorism, sex determination. Amphigony and parthenogenesis. General features of embryonic development. Levels of organization: protostomes and deuterostomes, diblastic and triblastic, symmetry, metamerism, body cavity.</p> <p>Fundamentals of comparative morphology and physiology The integument. Skeletal systems. The movement. Osmotic regulation, excretion, thermoregulation. Breathing, circulation. Nutrition and digestion. Nervous system and sense organs.</p> <p>Animal diversity Definition of biological diversity: genetic diversity, diversity at the species level, diversity at the community / ecosystem level. The value and function of biodiversity. Threats to animal diversity.</p> <p>Taxonomy and structural plans of animals Nomenclature and animal classification. The animal architecture and bauplan.</p> |

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| | <p>Overview of the main animal phyla Protozoa. Generality, characteristics and phylogeny of the main animal phyla: Poriferans, Cnidarians, Mollusks (Gastropods, Bivalves and Cephalopods), Annelids, Arthropods (Chelicerates, Crustaceans, Myriapods, Hexapods), Echinoderms, Chordates (Cephalochordates, Urochordates, Vertebrates: Chondrichthyes, Osteichthyes, Amphibians, Reptiles, Birds, Mammals).</p> |
| Books and bibliography | <p>AT THE STUDENT'S CHOICE BETWEEN:</p> <ul style="list-style-type: none"> De Bernardi et al. (2012). Zoologia. Parte Generale. (Idelson-Gnocchi Ed.) Candia et al. (2016). Zoologia. Parte Sistematica. (Idelson-Gnocchi Ed.) <p>Or</p> <ul style="list-style-type: none"> Hickman et al. (2020). Fondamenti di zoologia. (McGraw-Hill Ed.) Hickman et al. (2020). Diversità animale. (McGraw-Hill Ed.) |
| Additional materials | <p>During the course students will be provided with further bibliographical references as well as slides, scientific articles and links to zoological web sites.</p> |

| Work schedule | | | |
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| Total | Lectures | Hands on (Laboratory, working groups, seminars, field trips) | Out-of-class study hours/ Self-study hours |
| Hours | | | |
| 100 | 32 | 0 | 68 |
| ECTS | | | |
| 4 | 4 | | |
| Teaching strategy | | | |
| Frontal lessons by means of PowerPoint presentations. | | | |
| Expected learning outcomes | | | |
| Knowledge and understanding on: | At the end of the course the student must have acquired the basic knowledge fundamental principles of animal life starting from the concepts of general zoology (cytology; reproductive and developmental biology; elements of Mendelian genetics; fundamental principles of evolutionism) up to the description of the main animal phyla (levels of biodiversity; scientific nomenclature; structural models of the animal phyla; morphological and functional differences of the main animal phyla). | | |
| Applying knowledge and understanding on: | At the end of the course the student must have acquired basic zoological skills and competences including tools for recognition and classification of the main animal phyla also through morphological analysis of representative models and dichotomous keys. | | |
| Soft skills | <ul style="list-style-type: none"> Making informed judgments and choices Acquisition of autonomy in the identification and interpretation of methodologically adequate paths to describe the distinctive characteristics of animal phyla. Communicating knowledge and understanding Acquisition of zoological terminology and nomenclature useful for an effective presentation of the basic concepts of general zoology and the complexity of animal life. Capacities to continue learning Acquisition of the ability to integrate knowledge through the consultation of | | |

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| | scientific publications, texts or computer resources with scientific content. ○ |
| Assessment and feedback | |
| Methods of assessment | The student's assessment includes a final oral exam. |
| Evaluation criteria | <ul style="list-style-type: none"> • Knowledge and understanding The student is called to apply the theoretical aspects acquired for the recognition, classification and description of the animal phyla also by means of comparative morphological analyzes of representative models. • Applying knowledge and understanding The student must be able to apply the theoretical knowledge acquired by demonstrating the ability to recognize the main animal taxa studied during the course. • Autonomy of judgment The student must be able to independently analyze the knowledge and skills acquired by demonstrating his ability to identify the morphological and structural characteristics necessary for the identification and taxonomic classification of the studied animal phyla. • Communication skills The student must have acquired the ability to communicate the concepts learned using correct zoological terminology and nomenclature, discussing and critically commenting the learned concepts. • Capacities to continue learning The student must demonstrate that he has acquired the tools to learn the theoretical knowledge of zoology from university books. The student will also be able to enrich his knowledge through in-depth studies, drawing on specific texts, scientific publications and/or documentaries, or thematic seminars and workshops proposed during the course. <p>○</p> |
| Criteria for assessment and attribution of the final mark | <p>The grade of the exam is expressed out of 30. The exam is deemed to be passed with a minimum grade of 18/30. The mere notional knowledge of terms and concepts is not sufficient for passing the exam.</p> <p>The final grade of the Biology exam is given by the arithmetic average grades obtained in both modules of Zoology and Botany. To students with a strongly positive evaluation in both modules of Zoology and Botany, the Examination Board may decide to award honours at the final mark of Biology (30 cum laude).</p> |
| Additional information | |
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