

General information	
Academic subject	<b>MANAGEMENT TECHNIQUES OF THE SEA FAUNA UNDER TREATMENT</b> (integrated exam of MANAGEMENT AND RECOVERY TECHNIQUES OF PROTECTED MARINE SPECIES)
Degree course	Animal Science L38
Academic Year	2022/2023 – III year
European Credit Transfer and Accumulation System (ECTS)	3 (ECTS lessons: 2 + ECTS exe/lab/tutor: 1)
Language	Italian
Academic calendar (starting and ending date)	II Semester
Attendance	Mandatory

Professor/ Lecturer	
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Virtual headquarters	Microsoft Teams cod. d4b7w8k
Tutoring (time and day)	From Monday to Friday 9:30-16:30 by appointment via e-mail

Syllabus	
<b>Learning Objectives</b>	The teaching course aims to acquire by the student a good basic knowledge for the management and recovery of protected marine species.
<b>Course prerequisites</b>	The student must have adequate knowledge and skills concerning the General Pathology and Pathophysiology, Drug Law, Pharmacovigilance and Toxicology, Biosafety and Health Management exams.
<b>Contents</b>	Outline of the rules governing the protection of sea turtles. Bases of anatomy of sea turtles. Bases of physiology of sea turtles. Biosecurity standards for the management of marine reptiles. Restraint of sea turtles. Compilation of medical records. Monitoring of the main vital parameters (respiratory rate, temperature, application of electrodes for ecg). Nutrition status assessment. Evaluation and removal of ectoparasites, epibionts and epiphytes from the surface of animals. Evaluation of the main reflexes and reactivity of the animals. Evaluation of the movement of animals out of water and in water, of normal or altered buoyancy and of the ability to dive. Management of relaying tanks (water quality, water salinity calculation). Preparation and administration of the food by mouth or by tube feeding. How to carry out microbiological, cloacal, ocular and wound swabs, provide assistance for blood sampling. Wound cleaning and disinfection. Positioning for radiographic, ultrasound and CT examinations. Management of surgical instruments during wound curettage and minor surgery. Assistance to the veterinarian during turtle anesthesia.
<b>Books and bibliography</b>	Sea Turtle Health & Rehabilitation di C. Manire, T. Norton, B. Stacy, C. Innis, C. Harms (2017); J. Ross Publishing. Bibliographic material provided by the teachers. Class notes.
<b>Additional materials</b>	

<b>Work schedule</b>			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
<b>75</b>	<b>20</b>	<b>25</b>	<b>30</b>
<b>ECTS</b>			
<b>3</b>	<b>2</b>	<b>1</b>	
<b>Teaching strategy</b>		Theoretical lessons are held in a classroom equipped with multimedia tools such as a PC, projector, internet connection, in order to show, at the same time as the explanation, power point slides and explanatory videos. The practical activities take place at the Sea Turtle Clinic. The students divided into small groups are followed by the teachers and collaborators. Each student is asked to individually carry out the practical activities covered by the exercise and to discuss them with the teachers or assistants.	
<b>Expected learning outcomes</b>			
<b>Knowledge and understanding on:</b>		<ul style="list-style-type: none"> <li>○ Knowledge of the main threats to protected marine species;</li> <li>○ Knowledge of how to recover specimens of protected marine species found in difficulty;</li> <li>○ Knowledge of the methods of approach and containment relating to protected marine fauna;</li> <li>○ Knowledge of the most commonly used intervention methods for the management of protected marine fauna.</li> </ul>	
<b>Applying knowledge and understanding on:</b>		<ul style="list-style-type: none"> <li>○ Ability to recognize the main causes that lead a specimen of protected marine fauna to be in a state of difficulty;</li> <li>○ Ability to identify and solve the main management problems relating to protected marine species;</li> <li>○ Ability to support the veterinarian in identifying the best strategies to cope with different situations.</li> </ul>	
<b>Soft skills</b>		<ul style="list-style-type: none"> <li>• Making informed judgments and choices <ul style="list-style-type: none"> <li>○ At the end of the course, the student should be able to understand the different critical situations related to the correct management of protected marine species and to propose a correct management plan in the different circumstances.</li> </ul> </li> <li>• Communicating knowledge and understanding <ul style="list-style-type: none"> <li>○ Acquisition of the skills and the correct scientific terminology to be able to correctly relate to veterinarians, biologists and wildlife technicians, as well as the ability to work in a team, adopting adequate communication and interaction strategies.</li> </ul> </li> <li>• Capacities to continue learning <ul style="list-style-type: none"> <li>○ Acquire the ability to autonomously improve one's knowledge through further studies and in-depth studies, more advanced courses and training periods at structures specialized in the care and recovery of protected marine fauna.</li> </ul> </li> </ul>	
<b>Assessment and feedback</b>			
<b>Methods of assessment</b>		The knowledge and skills acquired will be assessed in the final phase of the course	

	through the involvement of students in the management and care of the specimens present in the Sea Turtle Clinic, as well as through an oral final exam that will ensure the acquisition of knowledge provided as detailed in the course objectives.
Evaluation criteria	<ul style="list-style-type: none"> <li>• Knowledge and understanding <ul style="list-style-type: none"> <li>○ Know the correct ways of approaching marine fauna under treatment and be able to recognize the different critical situations;</li> </ul> </li> <li>• Applying knowledge and understanding <ul style="list-style-type: none"> <li>○ Knowing how to identify the appropriate modes of action in the presence of a specimen of marine fauna in difficulty;</li> </ul> </li> <li>• Autonomy of judgment <ul style="list-style-type: none"> <li>○ To be able to formulate a judgment regarding the best management procedure of the specimens under treatment according to the different circumstances;</li> </ul> </li> <li>• Communicating knowledge and understanding <ul style="list-style-type: none"> <li>○ Knowing how to appropriately use the specific terminology useful for interacting within a work group;</li> </ul> </li> <li>• Communication skills <ul style="list-style-type: none"> <li>○ Knowing how to appropriately use the specific terminology useful for interacting within a work group;</li> </ul> </li> <li>• Capacities to continue learning <ul style="list-style-type: none"> <li>○ To be able to rework the concepts learned to adapt them to new situations and to be able to draw on the sources available for their management.</li> </ul> </li> </ul>
Criteria for assessment and attribution of the final mark	The assessment of the learning achieved takes place through an oral interview aimed at ascertaining the degree of knowledge of the proposed topics. The final grade is awarded out of thirty. The exam is passed when the grade is greater than or equal to 18. The final grade of the integrated exam is the result of the collegial assessment relating to the two courses. In any case, the student must acquire a mark greater than or equal to 18/30 for each part of the exam relating to the two courses.
<b>Additional information</b>	