



| General information                                     |  |
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| Academic subject  | Systematic Botany<br><i>Integrated course with Systematic Botany Laboratory (3cfu)</i> |
| Degree course   | <i>Natural Sciences</i>  |
| Academic Year   | <i>II</i>  |
| European Credit Transfer and Accumulation System (ECTS) | 6  |
| Language  | <i>Italian</i>   |
| Academic calendar (starting and ending date)            | <i>I semester (1/10/2021-13/1/2022)</i>  |
| Attendance  | <i>Yes</i>   |

| Professor/ Lecturer     |   |
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| Name and Surname        | Viviana Cavallaro   |
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| Department and address  | <i>Department of Biology, Campus "E Quagliariello" Bari</i><br><i>my personal studio: at the 1st floor of the " Botanical Garden" palace</i><br><i>- Campus. "E Quagliariello" Bari</i> |
| Virtual headquarters    | <i>Teams code :d069n0h</i>  |
| Tutoring (time and day) | <i>On Tuesday from 9.00 to 11.00 and Wednesday from 12,00 to 14,00</i>  |

| Syllabus             |   |
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| Learning Objectives  | The student will have a basic knowledge of systematic botany and a good use of the scientific method, will also have professional skills in the field of plant biodiversity and will be able to analyze the plant component of the natural and anthropized environment in terms of study and reading of the landscape, with a view to conservation and recovery of natural environments   |
| Course prerequisites | Basic knowledge in Botany   |
| Contents             | Concept of species. Taxonomy, nomenclature, systematics and phylogeny.<br>Morphological features having a taxonomic value.<br>The various ways of sexual and asexual reproduction in plants.<br>The life cycle of plants. Isospory and heterospory.<br>Cyanobacteria and their ecological and evolution importance.<br>Eukaryotics algae, reproduction, ecological value: Rhodophyta, Chlorophyta, Charophyta, Euglenophyta, Cryptophyta, Haptophyta, Phaeophyta, Bacillariophyta, .<br>Fungi, systematics, reproduction, ecological value: Oomycota (Oomycetes), Eumycota (Chytridiomycetes, Zygomycetes, Ascomycetes, Basidiomycetes) ).<br>Lichens.<br>Adaptations to terrestrial life |



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|                               | <p>Bryophyta . : Anthocerotopsida, Marchantiopsida, Bryopsida<br/>         Phylogenetic relations among the most important vascular plants<br/>         Pteridophyta : Psilophytopsida, Psilotopsida, Lycopodiopsida,<br/>         Equisetopsida, Pteropsida.<br/>         Spermatophyta: Ginkgoopsida, Cycadopsida, Gnetopsida, Pinopsida.<br/>         Magnoliophytina (Magnoliopsida, Rosopsida, Liliopsida).</p> |
| <b>Books and bibliography</b> | Botanica generale e diversità vegetale. Pasqua, Abate, Forni. Editore Piccin<br>Strasburger – Trattato di Botanica sistematica vol. II Delfino Editore Roma  |
| <b>Additional materials</b>   | Further files will be available.   |

| Work schedule                            |          |   |  |
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| Total                                    | Lectures | Hands on (Laboratory, working groups, seminars, field trips)  | Out-of-class study hours/ Self-study hours |
| <b>Hours</b>                             |          |   |  |
| 150                                      | 48       |   | 102  |
| <b>ECTS</b>                              |          |   |  |
| 6  | 6        |   |  |
| Teaching strategy                        |          | Lectures, collaborative reasoning, role play, study case.<br>Teaching is provided in a blended learning   |  |
| Expected learning outcomes               |          |   |  |
| Knowledge and understanding on:          |          | <p>The student have to understand:<br/>           the importance of Systematic Botany in understanding plants biodiversity;<br/>           the role played by the main methods of the discipline; the concept of species the ability to recognize taxonomic features.<br/>           The various ways of sexual and asexual reproduction in plants.<br/>           The traits of the principal taxa (in order to understand their evolutionistic meaning).<br/>           This knowledge will be acquired throughout lectures, discussion, collaborative reasoning and the analysis of various examples</p> |  |
| Applying knowledge and understanding on: |          | <p>The ability to recognize species by using modern methods and to analyze data independently.<br/>           The ability to use their knowledge to interpret data coming from a floristic analysis.<br/>           These skills will be reached throughout lectures and case studies</p>   |  |
| Soft skills                              |          | <ul style="list-style-type: none"> <li><i>Making informed judgments and choices</i><br/>               The ability to make judgements on botany themes and to interpret experimental datas. Specifically the student will be able to interpret taxonomic characters of various vegetals. Lectures and collaborative</li> </ul>  |  |



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|  | <p>reasoning will be used to reach these skills.</p> <p><i>Communicating knowledge and understanding</i><br/>The ability to work alone and in groups and to use a proper vocabulary.</p> <ul style="list-style-type: none"> <li>• <i>Capacities to continue learning</i><br/>The ability to interpret critically the course contents.<br/>The ability to use proper sources and to make proper links between the course contents.<br/>Collaborative reasoning will be used</li> </ul> |
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| <b>Assessment and feedback</b>                            |  |
| Methods of assessment                                     | Oral examination. Participation during lessons will also be taken into consideration   |
| Evaluation criteria                                       | <ul style="list-style-type: none"> <li>• <i>Knowledge and understanding</i><br/>Students have to know all course contents.<br/>To pass the exam the student should at least know the following topics: concept of species, taxonomy, systematics and phylogeny, morphological features having a taxonomic value, sexual and asexual reproduction in plants, the most important adaptations to aquatic life and on earth, main Spermatophyta traits</li> <li>○</li> <li>• <i>Applying knowledge and understanding</i><br/>The ability to recognize plant species by using modern methods and to analyze data independently is considered to be essential</li> <li>○</li> <li>• <i>Autonomy of judgment</i><br/>The student must show autonomy of judgment on the main issues of the discipline and always on the basis of scientifically correct principles.</li> <li>○</li> <li>• <i>Communicating knowledge and understanding</i><br/>The ability to communicate properly and in a clear way and to use an adequate vocabulary will be taken into consideration</li> <li>• <i>Capacities to continue learning</i><br/>Students should show to be able to interpret critically the course contents and to make proper connections between them.<br/>If they do so, they will be well valued</li> </ul> |
| Criteria for assessment and attribution of the final mark | The evaluation is expressed out of thirty  |
| <b>Additional information</b>                             |  |
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