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| <b>General Information</b> |   |
| Academic subject           | General Agronomy  |
| Degree course              | Management and conservation of the agro-forest environment (Class L-25) |
| Curriculum                 |   |
| ECTS credits               | 6 CFU   |
| Compulsory attendance      | No  |
| Language                   | Italian   |

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|------------------------|----------------|-------------------------|--------|
| <b>Subject teacher</b> | Name Surname   | Mail address            | SSD    |
|                        | Giovanna Cucci | giovanna.cucci@uniba.it | AGR/02 |

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| <b>ECTS credits details</b> | Areas                | SSD    | Credits |
| Basic teaching activities   | Agricultural Science | AGR/02 | 6       |

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| <b>Class schedule</b> |             |
| Period                | 2° semester |
| Year                  | second      |
| Type of class         | Lecture     |

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| <b>Time management</b>   |    |
| Hours                    | 75 |
| In-class study hours     | 30 |
| Out-of-class study hours | 45 |

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| <b>Academic calendar</b> |              |
| Class begins             | 5 March 2018 |
| Class ends               | 22 June 2018 |

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| <b>Syllabus</b>            |  |
| Prerequisites/requirements |  |
| Expected learning outcomes | <p><i>Knowledge and understanding</i><br/> At the end of the course students will be able:</p> <ul style="list-style-type: none"> <li>○ To comprehend the multifunctional relationship linking vegetal production and anthropic and non anthropic conditioning factors.</li> <li>○ To describe the most important physical and biological mechanisms that produce the expected effects of the previous factors on the continuous soil / plant atmosphere system.</li> <li>○ To classify fertilizers.</li> <li>○ To classify herbicides and physical/biological weed management strategies.</li> <li>○ To classify soil tillage machineries.</li> </ul> <p><i>Applying knowledge and understanding</i><br/> At the end of the course students will be able:</p> <ul style="list-style-type: none"> <li>○ To classify and classify the relative importance of expected effects when agronomic and environmental factors are acting on the soil, the atmosphere or the crop</li> <li>○ To recognize the physical and hydrological characteristics of different types of soil.</li> <li>○ To recognize the most important machineries for soil tillage.</li> <li>○ To recognize on the field the most important field arrangements to prevent erosion, control runoff or enable main agricultural facilities for excessive water management</li> </ul> |

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|                  | <p>and irrigation</p> <ul style="list-style-type: none"> <li>○ To create and resolve fertilization plans.</li> <li>○ To create and resolve water balance problems.</li> </ul> <p><i>Making informed judgements and choices</i><br/> <i>At the end of the course students will be able:</i></p> <ul style="list-style-type: none"> <li>○ Hypothesize which characteristics of the soil and atmosphere influence the crop production</li> <li>○ Propose the best management practices to solve the most frequent crop cultivations problems</li> </ul> <p><i>Communicating knowledge and understanding</i><br/> <i>At the end of the course students will be able:</i></p> <ul style="list-style-type: none"> <li>○ Give a sufficient range of practical examples of application of agronomic cultivation techniques.</li> <li>○ Use an appropriate and up-to-date agronomic technical vocabulary.</li> </ul> <p><i>Capacities to continue learning</i><br/> <i>At the end of the course students will be able:</i></p> <ul style="list-style-type: none"> <li>○ Provides the way to interpret and manage the production in agriculture.</li> </ul> |
| Contents         | <ul style="list-style-type: none"> <li>● Introduction</li> <li>● Crop production factors.</li> <li>● Agrometeorology</li> <li>● Soil environment: agricultural and natural land, soil sedimentation, structure, water management, other soil properties. Soil ploughing: aims, functions, tools, classification, new orientations.</li> <li>● Soil water management: water management works, dry land farming, irrigation</li> <li>● Soil fertility management: the importance of organic matter, organic and mineral fertilizers, fertilization techniques.</li> <li>● Propagation plants</li> <li>● Weed infestation control : general information, control methods</li> <li>● Cropping systems. Herbaceous crops prevalent in Italian mountain areas: cereals, grain legumes, forage crops (grasslands, meadows and pastures)</li> </ul>   |
| Course program   |   |
| Bibliography     | <ul style="list-style-type: none"> <li>● Lecture notes and course materials distributed in class.</li> <li>● Giardini, L. L' agronomia per conservare il futuro. Patron Editore 2012</li> <li>● Bonciarelli, F. Fondamenti di Agronomia generale. Ed. Edagricole, 1989</li> <li>● Cavazza L., A. Patruno Terreno agrario – il comportamento fisico. REDA, 2005</li> <li>● Arnon, I. Agriculture in dry lands: principles and practise Elsevier Editore, 1992.</li> <li>● Baldoni, R., Giardini, L., Coltivazioni Erbacee – Cereali Proteaginose. Patron Editore 2000</li> <li>● Baldoni R., Giardini L., Coltivazioni erbacee - Foraggiere e tappeti erbosi. Patron Editore 2002</li> </ul>   |
| Notes            |   |
| Teaching methods | The topics of the course will be treated with the help of Power Point   |

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|  | <p>presentations and samples of machinery and equipments.<br/>All students could receive all presentations and texts utilized for lectures.</p>  |
| Assessment methods (indicate at least the type written, oral, other) | <p>Only the students enrolled in the academic year during which this module is provided, can have an intermediary exam during the time of teaching. The result of this intermediary exam remains valid for the whole academic year and concurs to the final evaluation of the student (in proportion to the ECTS evaluated during the intermediary exam).</p> <p>The exam, as well as the intermediary exam, consist of an oral test with questions related to the lectures and laboratory classes, such as reported in the Didactic Regulation course in Management and conservation of the agro-forest environment and in the syllabus (annex A). The intermediary exam will be positive with a vote of at least 28/30.</p> <p>The evaluation of the student is based on criteria previously fixed such as reported in the Annex A of the Didactic Regulation course in Management and conservation of the agro-forest environment and is expressed in thirtieths.</p>   |
| Evaluation criteria  | <p><i>Knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ Technical management capacity of the various components of the agri-ecosystem.</li> </ul> <p><i>Applying knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ Ability to select good agronomic practices.</li> </ul> <p><i>Making informed judgements and choices</i></p> <ul style="list-style-type: none"> <li>○ Ability to develop out an environmental analysis of the rural system, knowing to identify the criticalities and potentials with reference to agricultural work.</li> </ul> <p><i>Communicating knowledge and understanding</i></p> <ul style="list-style-type: none"> <li>○ The student is able to expose and argue on complex agronomic issues both in written and oral form.</li> </ul> <p><i>Capacities to continue learning</i></p> <ul style="list-style-type: none"> <li>○ The student is able to learn information from norms and reference texts in the agronomic sector</li> <li>○ The student is able to use the tools and new IT technologies that ensure a continuous updating of knowledge in the specific professional field and in the field of scientific research.</li> </ul> |
| Further information  |  |