

ACADEMIC YEAR: 2019/2020

COURSE: Agronomy and herbaceous crops in mountain environments

TYPE OF EDUCATIONAL ACTIVITY

TEACHER: Antonio Sergio De Franchi

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Language: Italian

ECTS: 6 + 1	n. of hours: 40 + 16	Campus: Potenza School of Agriculture, Forestry, Food and Environmental sciences Program: Forestry and Environmental sciences (LM)	Semester: 1 <sup>st</sup>
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#### EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course aims at providing basic elements for understanding the environment and techniques of production and management in agro-pasture systems. The main objective is to provide students with criteria for identifying elements of the crop production cycle, methods for crop management and for evaluating sustainability and appropriateness of agronomic techniques.

##### **knowledge and understanding:**

- o knowledge and understanding of the production environment: soil and atmosphere
- o Elements of agronomy and management
- o Identification of the main agro-pasture mountain systems
- o Elements for understanding relationships between the environment, management and the quality of products.

##### **applying knowledge and understanding: applying basic notions for:**

- understanding the multi-functionality of cropping systems
- choosing agricultural techniques and crops for mountain systems
- planning management alternatives based on specific objectives (productivity, sustainability, environment protection)

##### **making judgements:**

- the choice of crop management in mountain environments
- sustainability
- feasibility

##### **communication skills:**

ability to communicate the relevance of the environment and management techniques on productivity, sustainability and quality to technical and non-technical audience and stakeholders

##### **learning skills:**

ability to access technical and scientific literature and sources of statistical data. Ability to discriminate relevant information from non-relevant issues.

#### PRE-REQUIREMENTS

The courses of Forest Botany and Chemistry are required

#### SYLLABUS

##### **BD1 The environment: (12 h lecture + 8 h practicals)**

Soil  
Atmosphere

##### **BD2 Agronomy: management techniques (24 h lecture + 8 h practicals)**

Soil management  
Crop management  
Management of crop-environment relations

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Multifunctionality of crops  
Ecosystem services

**BD3 Agro-pasture systems in mountain and hill environment (4 h lecture)**

Agriculture in mountain and hill environments  
Agro-pasture systems

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**TEACHING METHODS**

The course includes 40 h lectures and 16 h practical. The students attending the course will be stimulated to actively participate to the course using a variety of methods (writing of short essays and answering open-answer questions, using lab methods and producing lab reports.)

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**EVALUATION METHODS**

The students attending the course need to pass two written (mid term, end of course) examinations (open answer questions). The students not attending the course or who are unable to pass the written examinations will have to sit for an oral examination and a practical examination.

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**TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL**

Course material and handouts will be provided in electronic format during the course and temporarily stored on a document cloud which will be made accessible to the student.

Suggested textbooks

Agronomia. P. Ceccon, M. Fagnano, C. Grignani. Edises. 2017

Coltivazioni erbacee vol. I - Cereali e proteaginose di Baldoni / Giardini Patron editore

Coltivazioni erbacee vol. III - Foraggiere e tappeti erbosi di R. Baldoni e L. Giardini Patron editore

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**INTERACTION WITH STUDENTS**

During the first lecture, the structure and organization of the course and the evaluation procedure will be presented.

The lecturer will be available for receiving students at least 4 h a week (on Monday and Wednesdays) or after the lectures. Students can also communicate with the lecturer via E-mail.

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**EXAMINATION SESSIONS (FORECAST)**

Usually the first and the last Wednesday of each month except August.

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**SEMINARS BY EXTERNAL EXPERTS**    YES

**Examination committee:**

Prof. Antonio Sergio De Franchi (President), Prof. Mariana Amato, Prof. Gherbin Piergiorgio, Prof. Rivelli Anna Rita, Dott. Giuseppe Landi