



---

**COURSE: SUSTAINABLE CROPPING SYSTEMS**

---

ACADEMIC YEAR: 2019-2020

---

TYPE OF EDUCATIONAL ACTIVITY: Affine

---

TEACHER: Stella LOVELLI

---

e-mail: stella.lovelli@unibas.it

website: [www2.unibas.it/loveli](http://www2.unibas.it/loveli)

---

phone: 0971 205384

mobile (optional): 3293606259

---

Language: Italian

---

ECTS: 9 (7 CFU of lessons  
and 2 CFU of practice)

n. of hours: 56 (lessons) 32  
(practice)

Campus: Potenza  
School: SAFE  
Program:

Semester: II semester

---

#### EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The course has as its objective the acquisition of theoretical and practical knowledge for the crop system, knowledge of the elements and functioning of agro-ecosystems, including skills for the eco-sustainable management of cropping systems.

**Knowledge and understanding:** The student must demonstrate knowledge of the main cultivation techniques and know how to understand and address the issues related to the correct management of crop systems.

**Ability to Apply Knowledge and Understanding:** The student must demonstrate that he or she is able to carry out all the cultivation activities in a sustainable management approach and carry out environmental sustainability analysis in areas characterized by different crops.

**Judgment autonomy:** The student must be able to know how to independently evaluate and choose the most suitable tools for setting up correct strategies to ensure the correct agronomic and sustainable management of crops.

**Communicative Skills:** The student must have the ability to explain, in a simple way as it intervenes in the management of crop systems. The student must be able to present a written work or an oral presentation in the field of crop systems management using the correct scientific language.

**Learning Skills:** Students must be able to continuously update and enrich their knowledge through consultation of texts and / or publications, computer tools, participation in courses and seminars on the basis of the knowledge gained during the course in the Field of agronomy and herbaceous cultivation.

---

#### PRE-REQUIREMENTS

You must have acquired the following knowledge provided by the courses of "Agronomy", "Field crops" and "Horticulture".

---

#### SYLLABUS

CFU 1- (8 hours of lessons)

The training objective is the acquisition of theoretical and practical knowledge for the crop system with particular reference to the following topics:

Evolution of farming concept. The cropping system: definition and constituent elements. conventional and alternative cropping systems. Conservation agriculture. The concept of sustainability in agricultural production processes.

CFU 2 - (8 hours of lessons)

The training objective is the acquisition of theoretical and practical knowledge with particular reference to the following topics: the choice of cropping system: analysis and evaluation techniques. theoretical and practical aspects

---



---

---

in the use of indicators. Possible applications of the indicators in agro-environmental issues.

CFU 3 - (8 hours of lessons)

The training objective is the acquisition of theoretical and practical knowledge for precision farming and soil mapping systems.

CFU 4 - (8 hours of lessons)

The training objective is agronomic dimensioning of crop systems that may include solutions to management excess of water with particular reference to water logging and its effects; drainage, erosion and runoff control of fast flows, Land accommodation; Protective measures and recovery of soils subject to erosion.

CFU 5 - (8 hours of lessons)

The goal is the acquisition of theoretical and practical knowledge for mineral and organic fertilization. Fertilization plans.

CFU 6 - (8 hours of lessons) The goal is the acquisition of theoretical and practical knowledge for Fertilization plans.

CFU 7 - (8 hours of lessons) The goal is the acquisition of theoretical and practical knowledge for Rhizosphere and bio-fertilization

CFU 8 and 9 - (32 hours of laboratory tutorials)

The training objective is to acquire data and information for the crop management through active participation in exercises in the computer lab (use of irrigation scheduling software) and through numerical exercises.

---

---

#### TEACHING METHODS

The course includes 88 hours of teaching between Lessons and Laboratory tutorials. In particular it is provided 56 hours of lectures and 32 hours of guided exercises in the computer lab. At the end of the guided exercises, the students will have free access to the lab for further individual exercises.

---

---

#### EVALUATION METHODS

Learning will be verified during an oral examination at the end of the course. They will be drawn three questions, one of which will cover the knowledge and skills learned during the exercises.

---

---

#### TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

Ceccon P., AGRONOMIA, EdiSES, 2017

Teaching materials available on the website of the teacher : [www2.unibas.it/loveli/didattica](http://www2.unibas.it/loveli/didattica)

---

---

#### INTERACTION WITH STUDENTS

At the beginning of the course, after describing the objectives, program and methods of verification, the teacher provides students educational materials (giving a password to be able to download the course materials from the web site: [www2.unibas.it/loveli](http://www2.unibas.it/loveli)). Simultaneously, it collects a list of students who intend to take the course, together with name, serial number and email.

Office hours: Monday through Thursday from 10.00 to 13.00 at the study of the teacher (SAFE). In addition to weekly reception, the teacher is available at all times for a contact with the students, through their e-mail.

---

---

#### EXAMINATION SESSIONS (FORECAST)<sup>1</sup>

Calendar online: <https://unibas.esse3.cineca.it/>

---

---

SEMINARS BY EXTERNAL EXPERTS    YES X    NO

---

---

#### FURTHER INFORMATION

Examination committee: Lovelli Stella, Rivelli Anna Rita.

---