SCUOLA DI SCIENZE AGRARIE, FORESTALI, ALIMENTARI ED AMBIENTALI

ACADEMIC YEAR: 2018/2019

COURSE: **Pomology (AGR0100)**

TYPE OF EDUCATIONAL ACTIVITY: distinguishing	
TEACHER: Dr. Giuseppe MONTANARO	
e-mail: giuseppe.montanaro@unibas.it	web: https://sites.google.com/site/gmunibasil/home
Phone: +39 0835 351493	Mobile phone:
Teaching language: ITALIAN	

n. ECTS: 6 (5 class and 1 practice).	n. hours: 40 class + 16 practice.	CAMPUS: Potenza School: SAFE Degree program: Corso di Studi Magistrale in Scienze e Tecnologie Agrarie - Classe LM69 (0422 - LM STA LM69).	Semester: II

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

The Course will provide (theoretical and practical) key agronomic knowledges on cultivation, harvest, post-harvest and commercialization of the main temperate tree crops, their vocational areas and environmental sustainability. Students will recognise the importance of fruit tree industry within the *Agrifood* sector. Students will learn also the various farming systems (organic, conventional, integrated).

- **Knowledge and understanding:**

Students will learn basic knowledge mainly related to cultivation, harvest, post-harvest and commercialization issues of the fruit tree crops considered. For the tree crops considered students will demonstrate to know:

- The better cv/rootstock combination as influenced by training system, planting density, soil type and other factors (e.g., irrigation water availability, chilling units);
- Pruning and canopy management during the orchard lifespan;
- Irrigation and mineral nutrition;
- Key features of specific practices (e.g., fruit thinning, hormone sprays, soil management);
- Harvest and storage methodology;

- **Applying knowledge and understanding:**

Students would demonstrate their ability to analyse factors influencing cultivation strategies under specific soil and climatic conditions. They will also be able to apply the knowledges on Pomology to optimise yield and fruit quality.

- **Student capability assessment:**

Student would be able to independently evaluate and select the mostly appropriate management strategies during the cultivation, harvest, post-harvest and commercialization stages to ensure environmentally friendly optimal yield and high fruit quality.

- **Communication skills:**

Students would be able to easily explain (also to a non-expert audience) the various cultivation strategies accounting for the multifunctional rule of orchards, too. Student would be able to write (or talk) on Pomology using the correct scientific language and appropriate technical words.

- **Learning skills:**

Students would be able to continuously update their knowledge on Pomology through consultation of published and online sources, and actively attending seminars and meeting.

PRIOR-COURSE

Basic knowledge on tree morphology/physiology and on General Arboriculture are warmly suggested.

SYLLABUS

1st ECTS:

Evolution of fruit tree crops cultivation in Europe and Italy;

Peach, plum: productive, commercial and other specific issues including economic importance. Origin and key botany traits relevant for cultivation. Floral biology and bearing, cultivation, rootstocks, soil/climatic requirements, orchard management, planting and training systems, pruning, harvest, post-harvest handling and storage.

2nd ECTS:

Apricot, cherry: productive, commercial and other specific issues including economic importance. Origin and key botany traits relevant for cultivation. Floral biology and bearing, cultivation, rootstocks, soil/climatic requirements, orchard management, planting and training systems, pruning, harvest, post-harvest handling and storage.

3rd ECTS :

Pome fruit (eg., apple, pear, quince), strawberry: productive, commercial and other specific issues including economic importance. Origin and key botany traits relevant for cultivation. Floral biology and bearing, cultivation, rootstocks, soil/climatic requirements, orchard management, planting and training systems, pruning, harvest, post-harvest handling and storage.

4th ECTS :

Citrus, kiwifruit, grapevine: productive, commercial and other specific issues including economic importance. Origin and key botany traits relevant for cultivation. Floral biology and bearing, cultivation, rootstocks, soil/climatic requirements, orchard management, planting and training systems, pruning, harvest, post-harvest handling and storage.

5th ECTS :

Olive, minor species (e.g., almond, pistachio, chestnut, walnut, fig): productive, commercial and other specific issues including economic importance. Origin and key botany traits relevant for cultivation. Floral biology and bearing, cultivation, rootstocks, soil/climatic requirements, orchard management, planting and training systems, pruning, harvest, post-harvest handling and storage.

6th ECTS: practices

Some guided field trips will be organised at fruit tree farms and packhouse. Students will experience key issues of Pomology at both field and post-harvest scale.

TEACHING METHODS

The Course includes 56 hours lessons (40 hours class and 16 hours guided field practice). All class lessons will be delivered through MSPower-Point and online presentations.

EVALUATION METHOD

Learning will be verified at the end of the Course through an oral examination.

TEXTBOOKS AND ONLINE EDUCATION MATERIAL

AA.VV. Manuale di ortofrutticoltura. Innovazioni tecnologiche e prospettive di mercato. Sansavini e Ranalli Eds. Edagricole, 2012.

Rivista di Frutticoltura e di ortofloricoltura, Edagricole.

Additional teching material available online (e.g., Dropbox, GoogleDrive) details on shared folders will be communicate promptly.

INTERACTION WITH STUDENTS

At the start of Course, after the description of contents, objectives and verification methods, students' contact details including email will be collected and used for communications relevant for the Course. Teacher will be available in his office (SAFE) two days per week (details will be provided) in addition he will be available on demand upon an agreed appointment.

(estimated) EXAMINATION DATES

25/06/2019; 23/07/2019; 24/09/2019; 22/10/2019; 26/11/2019; 10/12/2019;

Changes will be promptly communicated by email and notice board.

SEMINARS BY EXTERNAL EXPERTS YES ☒ NO ☐

ADDITIONAL INFORMATION

Examination committee: Dr. Giuseppe Montanaro, Prof. Vitale Nuzzo, Prof. Bartolomeo Dichio.