

Science and Systems Approach on Sustainable Crop Production

The Postgraduate Program consists of three specializations:

- I. Innovative production systems for high value products**
- II. Modern systems approach on plant production and genetics/crop improvement**
- III. Exploitation and sustainable management of natural resources**

The subject of this Postgraduate program aims at the thorough scientific knowledge development and specialization of scientists on the subject of Science and Systems Approach on Sustainable Crop Production.

The scope of the program is the development of specialized scientists able to undertake positions in public and private enterprises on the above covered scientific areas who would be capable to support and advance the systems approach on (a) production of safe food and feedstock with environmentally-friendly methods and (b) sustainable management of genetic and natural resources.

The postgraduate program Science and Systems Approach on Sustainable Crop Production involves two semesters of studies, including 7 postgraduate courses and completion of an experimental thesis. The degree consists of 60 ECTS units, with 35 units obtained from the 7 courses and 25 units from the thesis. All courses are electives by the students in collaboration with the faculty member supervising their thesis.

COURSE TITLES PER SPECIALIZATION AND SEMESTER

Innovative production systems for high valued products

Winter Semester

Sustainable Crop Production

Crop Cultivation for Biomass and Energy Production

Innovations in Food and Drink Technology and Quality Evaluation

Innovative Fruit Crops

Spring Semester

Cultivation of Aromatic and Pharmaceutical Plants

Special Issues in Viticulture

Modern systems approach on plant production and genetics/crop improvement

Winter Semester

Sustainable Crop Production

Advances in Seed Production and Plant Propagation Technology

Selection Systems – Improvement of Yield Characteristics

Molecular Improvement – Plant Biotechnology

Modern Technologies in Agricultural Production

Soil Fertility and Plant Nutrition

Applied Statistics and Experimental Design Methods in the Biosciences

Spring Semester

Agrometeorology and Climate Change – Effects on Crop Production

Crop Growth Modelling

Improvement towards Stress Resistance – Quality Improvement

Use of R and Big Data problems in the Biosciences

Exploitation and sustainable management of natural resources

Winter Semester

Genesis, Classification, and Mapping of Soils – Agricultural System Evaluation

Soil Fertility and Plant Nutrition

Biodiversity Conservation and Management

Modern Technologies in Agricultural Production

Spring Semester

Management of Degraded Soils

Sustainable Irrigation Water Management