Czech University of Life Sciences Prague
Faculty of Tropical AgriSciences

Master's Degree Study Programme

Tropical Crop Management and Ecology (TCME)

Tropical Crop Management and Ecology (TCME) is a two-year Master's study programme taught in English. The programme is oriented on study of production and agroecology of tropical and subtropical crops and their traditional and ecologically sustainable cropping systems (e.g. agroforestry) as well as the modern production techniques (e.g. plant biotechnologies) including specific scientific disciplines, such as ethnobotany, chemoecology or fytotaxonomy. The programme consists of the courses addressing major crops' characteristics, cultivation systems and use including aspects of processing and commercialization. A special emphasis is put on the study of agricultural crops and environment relationships within tropical and subtropical agro-ecosystems and methods related to crop cultivation technologies, plant products properties and plant genetic resources conservation. Faculty provides many opportunities to gain hands-on experience and practical skills through its projects around the world. Students are highly encouraged to develop their master's thesis in conjunction with one of these development projects or with a local institution. The studies are terminated by State exam and defence of the Master's thesis. Students graduate with the title „Inženýr“ - Ing.

Examples of Master's theses:

- Ethnobotany of wild plans and crop wild relatives in walnut-fruit forests of Kyrgyzstan
- Effect of ploidy level on primary metabolism and yields of yacon (*Smallanthus sonchifolius*)
- Underutilized edible fruit tree species of the Philippines as a potential sources of antioxidants
- Agrobiodiversity in organic small-scale coffee farms in Chirinos district, Peru
- In vitro antioxidant activity of *Ampelocissus martinii* Planch

Indicative study plans

Obligatory courses

- ✓ Cereals and Pulses
- ✓ Agroforestry (Sistemas Agroforestales) *
- ✓ Plant Breeding and Genetic Resources Conservation
- ✓ Special Crops
- ✓ Tropical Phytocoenoses
- ✓ Economic Botany
- ✓ Tuber, Oil and Fibre Crops
- ✓ Tropical Horticulture and Floriculture
- ✓ Vegetable Production
- ✓ Fruit Production
- ✓ Tropical Pastures and Fodder Crops
- ✓ Research Training and Internship

Courses are supplemented by preparation of Master's theses.
** Course can be also studied in Spanish.*

The **Research Training and Internship** emphasizes the development of their methodological research or management skills gain in the field (data collection) or laboratory practice focused on the research of tropical bioresources at scientific, educational or even private institutions in the Czech Republic or abroad.

Required optional courses

- ✓ Agricultural and Environmental Microbiology
- ✓ Agroforestry Systems
- ✓ Animal Husbandry in Tropics
- ✓ Bioactive Natural Products
- ✓ Irrigation and Drainage
- ✓ Economics of Farming Systems
- ✓ Environmental Soil Science
- ✓ Farm Machinery for Plantations Crops
- ✓ GIS I
- ✓ Farming systems (Sistemas Agriculturales) *
- ✓ Plant Protection and Agroecology
- ✓ Management of (Sub-)Tropical Land-Use Systems
- ✓ Plant Tissue Culture
- ✓ Processing and Interpretation of Biological Data
- ✓ Quality, Storage and Processing of Plant Products
- ✓ Resource Ecology: Soil - Plant - Animal Interactions
- ✓ Rural Communication and Extension
- ✓ Tropical Dendrology

Students select at least 3 courses from this group.
** Course can be also studied in Spanish.*

Optional courses

Students select other courses which are taught in English from the actual offer of the Czech University of Life Science Prague or courses can be passed at foreign universities as part of Erasmus+ exchange programs.

State exam

State exam consists of Master's thesis defence and examinations from 2 obligatory and 1 optional topics.

Obligatory topics:

- Tropical Crop Management
- Tropical Agroecology and Conservation

Optional topics:

- Cash Crops Production
- Plant-Animal Interactions in Tropical Agroecosystems

Detailed study plans are available in the University Information System (UIS) – is.czu.cz