Master in Plant Biology

Introduction

Plant Biology is the science that studies plants and vegetation as an integral system, and is based on disciplines such as Systematic, Biotechnology, Ecology, Molecular Biology, Chemistry, Genetics, Palynology, Pathology, Climatology, Geography and Evolution, among others.

For this Master, the strengths of the Universidad del Quindío, the Universidad de Caldas and the Universidad Tecnologica de Pereira where articulated from their researches in Plant Biodiversity, Ecology and Plant Biotechnology. These institutions have been supporting the creation of research groups and strengthening the undergraduate programs of Biological and Environmental Sciences.

The Postgraduate includes studies in descriptive flora, ecological and molecular characterization and plant breeding. The Master in Plant Biology generates new knowledge concerning plant resources that can contribute to community education, development of science and technology, in order to generate strategies for the conservation and use of plants and vegetation.

With the Master in Plant Biology it is expected to improve the quality of management of plant resources in the region, through qualified professionals in the biological, agricultural, chemical and environmental sciences. The MSc may perform as managers and researchers for institutes, laboratories, gene banks, regional corporations, herbaria, museums and as teachers in high schools and universities.

The graduate of the Masters in Plant Biology can actively participate in multidisciplinary research groups to help develop methodologies to address problems associated with plant biology, whose current trends point to functional diversity, ecosystem restoration, conservation of species , phylogenetic systematic, molecular biology, agricultural biotechnology and genomics, among others.

Information

Program Name: Master in Plant Biology

Title Awarded: Students will receive the title Master of Science - Plant Biology.
The title will be awarded jointly by the Universidad de Caldas, Universidad Tecnologica de Pereira and the Universidad del Quindio.

The Master is accredited by 3 higher education institutions, namely:

- Universidad del Quindio.
- Universidad Tecnologica de Pereira

- Universidad de Caldas

The research interests, institutions, researchers, teachers and students of the Master are the pillars of the Biodiversity Research Center. Likewise, for the thesis there is the possibility to count with researchers from CENICAFE and CIAT.

Target

Mainly to:

- Biologists
- Agricultural Engineers
- Forestry Engineers

Option to:

- Chemicals
- Agribusiness Administrators
- Environmental Managers
- Environmental Engineers

Students who have not studied Ecology and Taxonomy or Plant Systematic while being an undergraduate are obliged to take them for leveling.

Objectives

To contribute to the characterization of the Colombian flora mega diversity to design management, protection and conservation plans of Andean ecosystems.

- Promote the understanding and management of biological resources as a strategy for conservation and utilization of genetic biodiversity of the country.
- Develop techniques for growing in vitro vegetables and for the characterization of the rich vegetation while supporting agriforestry.
- Establish mechanisms for the protection, conservation and usage of fragile ecosystems according to their dynamics.
- Socialize the botanical knowledge of the Colombian Andean flora.

Research Interests:

The training process has two research interests, each of which will be coordinated and directed by groups of experienced researchers in the area and have the support of institutions with expertise and adequate infrastructure, namely:

- Research in Plant Diversity
- Research in Plant Biotechnology

General topics or integrators

They refer to three workshops based on each of the research interests, they are:

- Vascular Plant Systematic
- Photochemistry Plant Ecology
- Plant Biotechnology

These topics aim to give a comprehensive and coordinated training on basic topics, so they must be studied and approved by all students in the program. They will be taken in the first semester, each one will run for 5 weeks and in total will be equivalent to 4 credits (4 hours/week/16 weeks = 64 hours).

Specific Topics

They refer to specific courses or seminars on each line of research and will only be studied by students who take the line, they are:

You must complete 5 in each line.

Line of Plant Diversity:

- Angiosperm Systematic and Botanical names.
- Biogeography
- Modern plant classification systems
- Agriecosystems, Forests and Biodiversity
- Production of plantlets

Line of Plant Biotechnology:

- Population Genetics
- Advanced Topics in Plant Biotechnology
- Production of plantlets
- Plant Genetic Resources
- Angiosperm systematic and Botanical names

The research process that each student must carry out in each line of research is:

1. Research Seminar
2. Research Work

The research seminar will be made during the first semester and it's meant to define and introduce the draft to the research work, which will take place in the next three semesters of the Master.

The seminar will last one semester and will be equivalent to 4 credits (4 hours/week/16 weeks = 64 hours). The research work will last for 3 semesters and will be equivalent to 12

credits.

Fuente: http://www2.utp.edu.co/english/masters/113/master-in-plant-biology