X-BIO
INSTITUTE OF ENVIRONMENTAL AND AGRICULTURAL BIOLOGY
UNIVERSITY OF TYUMEN

University of Tyumen
UTMN

UNIVERSITY OF TYUMEN *AND* ALL-RUSSIAN RESEARCH INSTITUTE OF PLANT PROTECTION

ANNOUNCE A NEW ACADEMIC PROGRAM

MASTER OF PLANT BIOSECURITY (PLANT BIOS)

PROGRAM OVERVIEW

Sustainable agricultural productivity growth in the face of climate and environmental change; soil quality deterioration; antimicrobial resistance of plant pests - these are some of the major challenges facing global life scientists.
The Master's Program in Plant Biosecurity offers students the expertise to understand and find solutions to these and other pertinent global biosecurity problems in a dynamic applied research setting.

KEY FEATURES

- Opportunity to conduct thesis research with leading scientists as project supervisors
- Access to the Institute's world-class laboratories
- Learning through participation in real-life, problem-oriented research projects
- English language of instruction
- Accomodation in the city center of Tyumen
- Classes in Tyumen and St. Petersburg

LEARNING OUTCOMES AND CORE COMPETENCIES

Familiarity with:

- ✔ cutting-edge methods of plant protection
- ✔ methods for chemical and biological control of phytopathogens, pests and weeds
- ✔ the application of modern laboratory tools and information technologies to ensure plant safety

Ability to:

- ✔ design and perform field and laboratory biological /ecological studies
- ✔ plan and conduct experiments independently, using the latest laboratory equipment and instruments
- ✔ assess phytosanitary conditions and organize plant protection activities that minimize potential environmental risks
- ✔ design projects aimed at the restoration of biological resources
- ✔ participate in the teaching and design of university courses

EMPLOYMENT OPPORTUNITIES

Potential career fields:

- study of wildlife and wildlife patterns
- environmental (biological, bioengineering, biomedical) protection
- monitoring, assessment and restoration of biological resources
- biological field research
- processing and analysis of data using modern digital technologies

Organizations and the enterprises for potential employment

- world's leading producers of plant protection products, such as Bayer, BASF, Syngenta, Cheminova, etc.
- technical, research, and administrative positions in the fields of biosecurity, quarantine and pest management

MAIN RESEARCH AREAS

- protection and provision
- biosecurity
- agribusiness
- sustainability
- biological control of phytopathogens

ADMISSION REQUIREMENTS

Application for study are made online and must be submitted by 25th of July.

Students with the following credentials are eligible for admission:

- Bachelor's degree
- Graduate Certificate or Graduate Diploma
- Applicants with non-standard qualifications will be considered on an individual basis, based on the University's Recognition of prior learning policy
- English competence

Admission exam

Students will be required to pass an admission test that is designed to assess the applicants' understanding of the major concepts in biology (Cell and Molecular Biology, Ecology, Genetics, Organismal Biology, Evolution and Diversity)

Interview

Each applicant is expected to conduct a short presentation in front of the admissions committee and answer any subsequent questions. Both, the admissions exam and the interview can be conducted via long distance communication technologies (e.g., Skype).

PROGRAM STRUCTURE

Program length – 2 years, 120 credit points

Tuition fee: 280 000 RU per year

Scholarships (tuition waivers): 15

Core Units - 28 credit points:

- Introduction to Plant Biosecurity points- 5 points
- Global Environmental Issues – 3 points
- Introduction to Soil Science - 4 points
- Morphology and Plant Taxonomy -3 points
- History and Methodology of Ecology – 2 points
- Plant Physiology - 2 points
- Introduction to Phytopathology – 2 points
- Botany- 3 points
- Computer Methods in Biosecurity - 2 points
- High-Technology Management and Economics- 2 points
- Microscopical Methods in Biological Research – 2 points
- Philosophical Problems of Science – 2 points
- English for Special Purposes- 3 points

Specified Electives - 26 credit points

- Fundamentals of Agricultural Chemistry – 2 points
- Biochemistry - 2 points
- Bioinformatics - 2 points
- Physical & Chemical Aspects of Pesticides Application – 2 points
- Introduction to Phytopathology – 2 points
- Molecular Biology in Agriculture- 2 points
- General Microbiology - 2 points
- Fungal Systematics- 2 points
- Plant Selection - 2 points
- General Entomology – 2 points
- Agricultural Entomology - 2 points
- Forest Entomology - 2 points
- Acarology - 2 points
- Biostatistics - 2 points
- GIS in Agriculture - 2 points

Internships, Research & Teaching – 57 credit points

- Internship I (Fieldwork-Based) – 3 points
- Internship II (Dissertation Research-Based) – 6 points
- Independent Research – 42 points
- Teaching practicum – 6 points

Masters Research Dissertation- 9 points

CONTACTS

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Program Co-Leads:

Dr. Philipp Gannibal,
Head of the All-Russian Research Institute of Plant Protection, X-BIO Professor

Dr. Andrei Tolstikov,
Vice Rector for Research and International Affairs, Professor at the Department of Zoology and Evolutionary Ecology of Animals

Read more about this program:
www.utmn.ru/en/x-bio

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RUSSIAN ACADEMIC EXCELLENCE PROJECT