Master of Plant Agriculture: MPAg

Plants and crops play a critical role in our ecosystem and are essential for a sustainable food system. The University of Guelph's professional course based Master of Plant Agriculture (MPAg) provides you with career-focused knowledge and expertise in plant genetics, breeding, biochemistry and physiology and crop production for you to pursue leadership positions in the private and public sector.

uoguel.ph/mpag

PROGRAM

The Master of Plant Agriculture program allows you to focus your courses to match your own unique interests and career focus. This program is ideal for recent graduates or working professionals that wish to gain scientific, cross-discipline skills in a hands-on learning environment through coursework. This program is generally completed in 3-4 semesters.

Specialize your program in:

- Crop Production Systems
- Plant Biochemistry and Physiology
- Plant Genetics and Breeding

HANDS-ON LEARNING

Learn about existing and emerging technologies in the agri-food and plant production sector through course based, collaborative projects that enhance your analysis skills and employability.

CONNECT WITH THE SECTOR

Connect with agri-food sector employers through site visits, field studies, and guest speakers. Students deepen their understanding of plant agriculture through courses, hands-on learning, and interactions with professionals and researchers, then apply concepts in a 12-16 week work-integrated learning experience with government, industry, or not for profit partners.

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ADMISSION REQUIREMENTS

Applicants must meet the admission requirements of a honours (4-year) bachelor's degree, or equivalent, from a recognized University in a relevant field of study* with an average standing of at least a 'B' average.

**You are still eligible to apply if you have an honours bachelor's degree in an unrelated field of study but have taken courses in related areas and/or gained relevant work experience since completing the degree.*

All applications will be reviewed by Faculty in the Department of Plant Agriculture and the MPAg Program Coordinator and will be evaluated based on:

- Two (2) referee asssessments
- A statement of interest in the program and/or career goals

Note: Related work experience is not required but beneficial.

Application Deadline:

Domestic: June 15
International: February 1, early application is strongly encouraged.

Entry: Fall only

ARE YOU INTERESTED IN:

- Biological and Cultural Control of Plant Diseases
- Advanced Plant Breeding
- Physiology of Crop Yield
- Metabolic Processes in Crop Plants
- Applied Bioinformatics
- Fruit and Vegetable Technology

CAREER OPPORTUNITIES:

Employers of graduates of the MPAg program may include:

- Syngenta
- Health Canada / Canadian Food Inspection Agency
- Corteva Agrisciences
- Bayer Crop Science
- Government Agricultural Agencies
- Agriculture and Agri-Food Canada

CONTACT INFORMATION

MPAg Graduate Program Coordinator
Dr. Helen Booker
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Graduate Program Assistant
Tara Israel
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Plant Agriculture: MSc, PhD

Plants provide food, raw materials, and a healthy environment, and are the cornerstone for life on earth. Plant Science is key to understanding and enhancing plant life. Research in the Department of Plant Agriculture is divided into four areas: Plant Biochemistry and Physiology, Plant Breeding and Genetics, Crop Production Systems, and Bioproducts.

uoguel.ph/PlantAgMScPhD

PROGRAM

Plant Agriculture is strongly rooted in crop science and horticultural science but we now encompass applied bioinformatics; molecular genetics; genomics; field, horticultural and greenhouse crops; plant breeding; turf and grassland studies; environmental sustainability; weed science/ecology; and the use of plant materials for health, fibres and industrial products. Furthermore, we recognize that society's expectations of agriculture are changing to include a wide range of health and environmental services such as producing food with nutraceuticals, protecting biodiversity, mitigating climate change and providing alternative energy sources.

We offer an interdisciplinary research environment in modern, well-equipped laboratories and research stations to provide excellence in graduate education and training.

ADMISSION REQUIREMENTS

As a part of the application package, applicants are required to secure a faculty advisor to supervise their program.

- The MSc requires a Baccalaureate degree in an honours plant science/biology program, or equivalent, from a recognized university or college with at least a B average over the last two years of full-time study (or equivalent).
- The PhD requires a MSc degree by thesis in a field appropriate to the proposed area of specialization with a minimum B average.

Research Fields

- Plant Biochemistry & Physiology
- Plant Breeding & Genetics
- Crop Production Systems
- Bioproducts

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OUR FACULTY

Faculty have modern labs with state-of-the-art equipment and access to controlled environment growth facilities and numerous field sites distributed over Ontario. Faculty are located on four campuses affording a variety of opportunities and experiences for our students. Our faculty are internationally recognized as leaders in their scholarly activities. Support for research is obtained from a variety of sources including federal, provincial, international, industrial and grower sponsors.

Application Deadline:
Ongoing
Entry: Fall, Winter, Spring

ARE YOU INTERESTED IN:

- Increasing plant production efficiency
- Developing new varieties
- Understanding plant growth and development
- Weed control
- Plant-environment interactions
- Discovering new environmentally friendly industrial materials

CAREER OPPORTUNITIES:

- Crop Consultant
- Breeder/Geneticist
- Plant Physiologist
- R&D Bio-Based Plastics

CONTACT INFORMATION

Graduate Program Coordinator:
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Graduate Program Assistant:
Tara Israel
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DEPARTMENTAL GRADUATE FACULTY WITH RESEARCH AREAS

Isabelle Aicklen
Ridgetown Campus
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Weed management, field crops, herbicide physiology & resistance

Helen Booker
Crop Science Building
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Wheat breeding & genetics

Gale G. Bozzo
E.C. Bovey Building
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Postharvest physiology & secondary metabolism

John A. Cline
Simcoe and Vineland Campus
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Fruit tree physiology & management

Adrian A. Correndo
Crop Science Building
acorrend@uoguelph.ca
Agronomy, soil fertility & crop nutrition, data science

Hugh J. Earl
Crop Science Building
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Oilseed physiology & agronomy

Mehrzad (Milad) Eskandari
Ridgetown Campus
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Soybean breeding & genetics

Bernard Grodzinski
E.C Bovey Building
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Photosynthesis, carbon partitioning and productivity, manned space program

David C. Hooker
Ridgetown Campus
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Field crop agronomy

A. Max P. Jones
E.C. Bovey Building
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Plant propagation and in vitro conservation

Katerina S. Jordan
E.C. Bovey Building
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Turfgrass science; nematology

Melanie Kalischuk
E.C. Bovey Building
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Genomics, pathology, specialty crop improvement

Elizabeth A. Lee
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Corn breeding & genetics

Lewis N. Lukens
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Bioinformatics, genetics of stress tolerance

Eric M. Lyons
E.C. Bovey Building
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Stress physiology; root biology of turfgrass species

Mary Ruth McDonald
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Diseases & integrated crop management of vegetables

Barry J. Micallef
Crop Science Building
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Physiology & genetics of vegetable crops

Manjusri Misra
Crop Science Building
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Bio-based new materials & green nanotechnology

Amar Mohanty
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Bioeconomy related to biobased materials, biofuels & biorefinery

Joshua Nasielski
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Field crop agronomy and crop physiology, eastern and northern Ontario

Manish N. Raizada
Crop Science Building
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Novel proteomics, genome & protein engineering technologies

Istvan Rajcan
Crop Science Building
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Soybean breeding & genetics; seed composition, bioproducts, yield stability, G x E, exotic germplasm

Darren E. Robinson
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Weed management & horticultural crops

Praveen K. Saxena
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Plant morphogenesis; conservation; medicinal plant biology

Kimberley Schneider
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Forage and service crops, nutrient cycling, sustainable agriculture

Gursahib Singh
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Field crop pathology-

Jayasankar Subramanian
Vineland Campus
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Tree fruit genetics, breeding & biotechnoloy & biotechnology

John Sulik
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Precision Agriculture, cropping systems, remote sensing & geographic information systems

Francois Tardif
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Physiology, ecology & molecular biology of herbicide resistance

Rene C. Van Acker
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Weed biology & ecology; biosafety & novel trait confinement; agronomy

Mohsen Yoosefzadeh Najafabadi
Crop Science Building
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Dry bean breeding, computational biology, quantitative genetics, bioinformatics & multi-omics-based breeding