

# 2012-2013 Graduate Calendar

The information published in this Graduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2012-2013 academic years, including the Fall Semester 2012, the Winter Semester 2013 and the Summer Semester 2013.

For your convenience the Graduate Calendar is available in PDF format.

If you wish to link to the Graduate Calendar please refer to the Linking Guidelines.

The University is a full member of:

- The Association of Universities and Colleges of Canada

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## Disclaimer

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The Office of Graduate Studies has attempted to ensure the accuracy of this on-line Graduate Calendar. However, the publication of information in this document does not bind the university to the provision of courses, programs, schedules of studies, fees, or facilities as listed herein.

## Limitations

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The University of Guelph reserves the right to change without notice any information contained in this calendar, including any rule or regulation pertaining to the standards for admission to, the requirements for the continuation of study in, and the requirements for the granting of degrees or diplomas in any or all of its programs.

The university will not be liable for any interruption in, or cancellation of, any academic activities as set forth in this calendar and related information where such interruption is caused by fire, strike, lock-out, inability to procure materials or trades, restrictive laws or governmental regulations, actions taken by the faculty, staff or students of the university or by others, civil unrest or disobedience, Public Health Emergencies, or any other cause of any kind beyond the reasonable control of the university.

The University of Guelph reaffirms section 1 of the Ontario Human Rights Code, 1981, which prohibits discrimination on the grounds of race, ancestry, place of origin, colour, ethnic origin, citizenship, creed, sex, sexual orientation, handicap, age, marital status or family status.

The university encourages applications from women, aboriginal peoples, visible minorities, persons with disabilities, and members of other under-represented groups.

# Introduction

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## Collection, Use and Disclosure of Personal Information

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Personal information is collected under the authority of the University of Guelph Act (1964), and in accordance with Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) [http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90f31\\_e.htm](http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90f31_e.htm). This information is used by University officials in order to carry out their authorized academic and administrative responsibilities and also to establish a relationship for alumni and development purposes. Certain personal information is disclosed to external agencies, including the Ontario Universities Application Centre, the Ministry of Training, Colleges and Universities, and Statistics Canada, for statistical and planning purposes, and is disclosed to other individuals or organizations in accordance with the Office of Registrarial Services Departmental Policy on the Release of Student Information. For details on the use and disclosure of this information call the Office of Registrarial Services at the University at (519) 824-4120 or see <http://www.uoguelph.ca/registrar/registrar/index.cfm?index>.

## Statistics Canada - Notification of Disclosure

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For further information, please see Statistics Canada's web site at <http://www.statcan.gc.ca> and Section XIV Statistics Canada.

## Address for University Communication

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Depending on the nature and timing of the communication, the University may use one of these addresses to communicate with students. Students are, therefore, responsible for checking all of the following on a regular basis:

### Email Address

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The University issued email address is considered an official means of communication with the student and will be used for correspondence from the University. Students are responsible for monitoring their University-issued email account regularly.

### Home Address

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Students are responsible for maintaining a current mailing address with the University. Address changes can be made, in writing, through the Office of Graduate Studies.

## Name Changes

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The University of Guelph is committed to the integrity of its student records, therefore, each student is required to provide either on application for admission or on personal data forms required for registration, his/her complete, legal name. Any requests to change a name, by means of alteration, deletion, substitution or addition, must be accompanied by appropriate supporting documentation.

## Student Confidentiality and Release of Student Information Policy Excerpt

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The University undertakes to protect the privacy of each student and the confidentiality of his or her record. To this end the University shall refuse to disclose personal information to any person other than the individual to whom the information relates where disclosure would constitute an unjustified invasion of the personal privacy of that person or of any other individual. All members of the University community must respect the confidential nature of the student information which they acquire in the course of their work.

Complete policy at <http://www.uoguelph.ca/policies>.



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## Food, Agricultural and Resource Economics

The graduate program in Food, Agricultural and Resource Economics offers opportunities for master of science (MSc) and doctor of philosophy (PhD) studies in agricultural economics. The MSc and PhD are research-oriented degrees which require both course work and a thesis.

### Administrative Staff

#### Chair

Alan P. Ker (314 MacLachlan, Ext. 53532)  
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#### Graduate Coordinator

John Cranfield (320 MacLachlan, Ext. 53708)  
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#### Graduate Program Assistant

Kathryn Selves (311 MacLachlan, Ext. 52771)  
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### Graduate Faculty

#### Andreas Boecker

MSc, PhD Kiel - Associate Professor

#### Maury E. Bredahl

BS, MS North Dakota State, PhD Minnesota - Professor

#### John A.L. Cranfield

BSc, MSc Guelph, PhD Purdue - Professor

#### Brady J. Deaton

BS Missouri, MS Virginia Tech, PhD Michigan State - Associate Professor

#### Glenn C. Fox

BSc (Agr), MSc Guelph, PhD Minnesota - Professor

#### Getu Hailu

BSc, MSc Alemaya, PhD Alberta - Associate Professor

#### Spencer Henson

BSc, PhD Reading - Professor

#### Alan Ker

BA Waterloo, MSc Guelph, PhD North Carolina State - Professor and Chair

#### Rakhal C. Sarker

BSc, MSc Bangladesh, PhD Guelph - Associate Professor

#### Richard Vyn

BSc Dordt College, MSc Alberta, PhD Guelph - Assistant Professor

#### Alfons J. Weersink

BSc Guelph, MSc Montana State, PhD Cornell - Professor

### MSc Program

The MSc program in Food, Agricultural and Resource Economics focuses on two major areas of emphasis:

- Food and agricultural economics
- Natural resource and environmental economics

The aim of the MSc program is to develop in students a fundamental understanding of economic principles and their application in identifying and solving relevant problems related to food, agriculture, and natural resources. The program also strives to develop appropriate analytical, methodological, and communication skills to enable students to analyze agriculture and resource problems effectively and explain their findings.

### Admission Requirements

All students entering the Master of Science program must have achieved the University required minimum 70% (B-) average or equivalent. In addition, they are expected to have already taken, the following basic courses:

- Intermediate level micro- and macro-economic theory (ECON\*2310 and ECON\*2410 or equivalent)
- Calculus and matrix algebra with applications to economics (ECON\*2770 or equivalent)
- Intermediate level statistics (ECON\*3740 or equivalent).

The Departmental Graduate Program Committee examines each application before the student is proposed to the School of Graduate Studies for admission into the program. Potential students are strongly encouraged to take an undergraduate course in advanced microeconomic theory as preparation for the course work in the MSc

### Thesis-based MSc Degree Requirements

In order to satisfy the degree requirements of the thesis-based MSc, students will complete successfully six taught courses, a seminar course, and write and defend an original MSc thesis. The minimum course work requirements (assuming all undergraduate background requirements have been met) are:

FARE*6100	[0.50]	The Methodologies of Economics
FARE*6380	[0.50]	Applied Microeconomics for Agricultural Economists
FARE*6910	[0.50]	Applied Policy Analysis I

FARE*6970	[0.50]	Applied Quantitative Methods for Agricultural Economists
Two graduate courses as approved by the student's advisory committee		

FARE*6800	[0.00]	Seminar in Agricultural Economics
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### Course-based MSc Degree Requirements

In order to satisfy the degree requirements of the course-based MSc, students will complete successfully seven taught courses, a seminar course and a research project course. The minimum course work requirements (assuming all undergraduate background requirements have been met) are:

FARE*6100	[0.50]	The Methodologies of Economics
FARE*6380	[0.50]	Applied Microeconomics for Agricultural Economists
FARE*6400	[0.50]	Advanced Topics in Agricultural Economics
FARE*6910	[0.50]	Applied Policy Analysis I
FARE*6970	[0.50]	Applied Quantitative Methods for Agricultural Economists
Two graduate courses as approved by the student's advisory committee		
FARE*6140	[1.00]	Major Paper in Food, Agricultural and Resource Economics
FARE*6800	[0.00]	Seminar in Agricultural Economics

### PhD Program

The PhD program in Food, Agricultural and Resource Economics focuses on two major areas of emphasis:

- Food and agricultural economics
- Natural resource and environmental economics

Across these areas there is a focus on both developed and developing countries. Students in the PhD program focus on an area of specialization relevant to their thesis research, plus complete courses in microeconomic theory and economic research methods. All students must complete and defend a thesis in their chosen area of specialization.

### Admission Requirements

Minimum University of Guelph admission requirements for a Doctoral program include: 1) a satisfactory baccalaureate; and 2) at the very minimum high second-class honours ('B' standing) in a recognized Master's degree. Students entering the PhD program are expected to have satisfied the requirements, or their equivalents, of the department's MSc degree in Food, Agricultural and Resource Economics. All applicants are required to submit valid GRE (General exam only) scores directly to the department prior to the departmental application deadline.

In cases where a student's master's degree is not equivalent to that offered by the department, the student may initially be accepted into the MSc program and may then apply for transfer to the PhD program at some time during the first three semesters. Applications for transfer must be supported by the Departmental Graduate Program Committee and approved by the Board of Graduate Studies. The student does not have to complete all the requirements of the MSc before transferring to the PhD program, but must achieve high academic standing.

### Degree Requirements

Students enrolled in the PhD program must successfully complete a program of at least ten taught courses that prepare them for the various elements of the qualification examination and thesis research, as outlined below. However, students that are able to demonstrate a satisfactory level of competence in any of these requirements may have these course requirements adjusted accordingly, subsequent to evaluation and the decision of the Departmental Graduate Program Committee.

#### Microeconomic Theory:

ECON*6000	[0.50]	Microeconomic Theory I
ECON*6010	[0.50]	Microeconomic Theory II

#### Economic Research Methods:

ECON*6140	[0.50]	Econometrics I
ECON*6160	[0.50]	Econometrics II
FARE*6100	[0.50]	The Methodologies of Economics
FARE*6970	[0.50]	Applied Quantitative Methods for Agricultural Economists

### Food, Agricultural and Resource Economics

FARE*6920	[0.50]	Applied Policy Analysis II
FARE*6400	[0.50]	Advanced Topics in Agricultural Economics

Plus ONE from the following:

FARE*6940	[0.50]	Food Firms, Consumers and Markets II
FARE*6960	[0.50]	Natural Resource Economics II

Plus ONE other graduate course approved by the student's advisory committee.

Students may also be permitted to take other courses as substitutes for the above, subject to approval by the Departmental Graduate Program Committee.

### Qualifying Examination

It should be noted that successful completion of the above courses is not necessarily sufficient for qualification to PhD candidacy.

Students are expected to complete successfully the qualifying examination in microeconomic theory that aims to assess a student's understanding of key theoretical concepts. Students are allowed two attempts at this qualifying examination. Students are expected to write the first attempt at this exam in the Summer semester of their first year and (i.e. their third semester in the program), if necessary, the second attempt in the Fall semester of their second year (i.e. their fourth semester in the program). Students that fail the examination at the second attempt will not be permitted to continue.

## Collaborative Programs

### International Development Studies MA/MSc/PhD

The Department of Food, Agricultural and Resource Economics participates in the International Development Studies (IDS) program. Please consult the International Development Studies listing for a detailed description of the MA/MSc/PhD collaborative programs including the special additional requirements for each of the participating departments.

## Courses

### Production Economics

#### FARE\*6380 Applied Microeconomics for Agricultural Economists F [0.50]

The objective of this course is to foster a deeper understanding of standard microeconomic concepts and their application to a wide variety of topics in food, agricultural, and resource economics. Emphasis is placed on what tool(s) to use in a wide variety of circumstances to address real life problems. Topics will include decisions by firms and consumers, market equilibrium, and production decisions.

*Prerequisite(s):* ECON\*2770 or equivalent, ECON\*2310 or equivalent, ECON\*3740 or equivalent

#### FARE\*6970 Applied Quantitative Methods for Agricultural Economists F [0.50]

This course exposes students to the empirical tools agricultural economists use when conducting research. Emphasis is placed on what tool(s) to use in a variety of circumstances. Topics covered will include advanced econometric techniques, optimization and simulation modelling. Students will also be exposed to the different quantitative software packages used in empirical research.

*Prerequisite(s):* ECON\*3740 or equivalent and ECON\*2770 or equivalent

### Agricultural Policy and Trade

#### FARE\*6600 Food Security and the Economics of Agri Food Systems in Developing Countries F [0.50]

The aim of this course is to understand the nature of food security in developing countries and relations with the economic performance of the agri food system. Towards this aim, the course focuses on both the agrifood system's role in the supply of nutritious food and its importance as a source of livelihood and as a driver of overall processes of economic development.

*Prerequisite(s):* ECON\*1050 or equivalent, ECON\*1100 or equivalent

#### FARE\*6910 Applied Policy Analysis I W [0.50]

An overview of domestic and international agrifood policies and an introduction to the concepts and methods used to evaluate domestic trade policies.

*Prerequisite(s):* FARE\*6380

#### FARE\*6920 Applied Policy Analysis II U [0.50]

A presentation and evaluation of advanced quantitative agrifood policy models and selected special topics related to domestic and trade policy evaluation.

*Prerequisite(s):* AGE\*6910 or FARE\*6910 or equivalent

*Co-requisite(s):* ECON\*3710

#### FARE\*6980 Agricultural Trade Relations W [0.50]

An examination of the institutional, theoretical and empirical aspects of international agrifood trade.

*Prerequisite(s):* One of AGE\*6910 or FARE\*6910

### Economics of Food Markets

#### FARE\*6930 Food Firms, Consumers and Market I F [0.50]

This course examines the application of microeconomic theory to food markets. Topics covered include: optimizing behaviour by economic agents, the certainty equivalent profit model and decision making under risk, optimal capital replacement models and their application to food system economics, consumer behaviour with respect to food products and behaviour with respect to food products and behaviour of marketing intermediaries and food processors. New developments in the economic theory of the form are surveyed. (Offered in alternate years.)

*Prerequisite(s):* ECON\*2310 or equivalent, ECON\*3740 or equivalent

#### FARE\*6940 Food Firms, Consumers and Markets II U [0.50]

This course builds on Food Firms, Consumers and Markets I by extending the breadth and depth of student's understanding and scope of economic analysis. Advanced techniques in producer and consumer theory, as well as advance market analysis techniques are presented and utilized. Understanding of the research process and advanced methods is emphasized throughout.

*Prerequisite(s):* AGE\*6930 or FARE\*6930

### Natural Resource Economics

#### FARE\*6950 Natural Resource Economics I W [0.50]

Natural Resources I introduces conventional theoretical modeling approaches to renewable resources, e.g. fisheries & forestry. Seminal theoretical literature is discussed. Emphasis is placed on setting up economic models, deriving and interpreting general results. Applied methods include dynamic optimization and regression analysis. Additional topics include Land Economics and the property rights approach.

*Prerequisite(s):* FARE\*6380

#### FARE\*6960 Natural Resource Economics II U [0.50]

Natural Resources II reviews & extends conventional theoretical modeling approaches to renewable resources, e.g. fisheries & forestry. Seminal literature is reviewed and contemp. theoretical work and empirical papers discussed. Emphasis on extending economic models addressing natural resource issues - uncertainty, externalities & policy instruments, and derive reduced-form versions of forestry & fishery for empirical estim. & analysis. Primary method of math analysis involves dyn. opt. techniques. Detailed math derivations & proofs expected. Also- extinction, climate change, carb sequest.

*Prerequisite(s):* AGE\*6950 or FARE\*6950

### Other Courses

#### FARE\*6100 The Methodologies of Economics W [0.50]

Alternative views on the methodology of economics are reviewed and assessed. The process of problem identification in the development of a research project proposal is investigated.

#### FARE\*6140 Major Paper in Food, Agricultural and Resource Economics U [1.00]

The major paper is an option only available to MSc students registered in the course-based option master program. An original research project related to the specialization of choice in food, agricultural and resource economics will be undertaken. The project will include preparation of a written paper and an oral presentation of the findings to the faculty.

*Restriction(s):* Restricted to students in the course-based MSc program in FARE

#### FARE\*6400 Advanced Topics in Agricultural Economics S [0.50]

The application of economic theory and various contemporary tools of economic analysis in solving production problems in the agricultural sector of the economy.

#### FARE\*6720 Readings in Agricultural Economics F,S,W [0.50]

A reading course on selected topics of special interest. May be offered to individual students or to groups of students in any semester.

#### FARE\*6800 Seminar in Agricultural Economics U [0.00]

Students in the MSc program must give two presentations at the annual MSc research symposium; one in their first year outlining their research plan, and one in their second year on their thesis research results.