

## 2006-2007 Graduate Calendar

The information published in this Graduate Calendar outlines the rules, regulations, curricula, programs and fees for the 2006-2007 academic years, including the Summer Semester 2006, the Fall Semester 2006, the Winter Semester 2007 and the Summer 2007.

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](#).

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Contact Information:



University of Guelph  
Guelph, Ontario, Canada  
N1G 2W1

519-824-4120

<http://www.uoguelph.ca>

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## **Disclaimer**

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The Office of Graduate Program Services 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, 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.

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## Table of Contents

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|  |           |
|--|-----------|
| <b>Food, Agricultural and Resource Economics .....</b> | <b>79</b> |
| MSc Program .....                                      | 79        |
| PhD Program .....                                      | 79        |
| Interdepartmental Programs .....                       | 80        |
| Courses .....  | 80        |



## 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

Maury Bredahl (204 MacLachlan, Ext. 53532)  
mbredahl@uoguelph.ca

#### Graduate Co-ordinator

Spencer Henson (327 MacLachlan, Ext. 53134)  
shenson@uoguelph.ca

#### Graduate Program Assistant

Bertilla Moroni (311 MacLachlan, Ext. 53915)  
bmoroni@uoguelph.ca

### Graduate Faculty

#### Andreas Boecker

MSc, PhD Kiel - Assistant Professor

#### Maury E. Bredahl

BS, MS North Dakota State, PhD Minnesota - Professor and Chair

#### John A.L. Cranfield

BSc, MSc Guelph, PhD Purdue - Associate Professor

#### F. Harry Cummings

BA Western Ontario, MA, PhD Clark - Professor

#### Brady J. Deaton

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

#### Glenn C. Fox

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

#### Getu Hailu

BSc, MSc Alemaya, PhD Alberta - Assistant Professor

#### Spencer Henson

BSc, PhD Reading - Professor

#### Karl D. Meilke

BS Washington State, PhD Minnesota - Professor

#### Craig J. Pearson

BSc Agr Western Australia, MSc Guelph, PhD Macquarie - Dean, Ontario Agricultural College

#### Wayne C. Pfeiffer

BS, PhD Nebraska - Associate Professor

#### Donna T. Ramirez

BS Philippines, PhD Illinois - Assistant Professor

#### Rakhal C. Sarker

BSc, MSc Bangladesh, PhD Guelph - Assistant Professor

#### David H. Sparling

BSc Queen's, MBA Wilfrid Laurier, PhD McMaster - Associate Professor (Joint appointment with College of Management and Economics)

#### Francis Tapon

Licence, Des Science Economiques Paris, MBA Columbia, MA, PhD Duke - Professor

#### Alfons J. Weersink

BSc Guelph, MSc Montana State, PhD Cornell - Professor

### MSc Program

The MSc program emphasizes the economics of agricultural markets, food business economics and 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 agriculture, food and related fields. 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, or be expected to take at the initiation of the program, 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).

These courses, if needed, normally are taken as make-up courses and do not carry graduate credit. In some instances they may be supplemented with other undergraduate courses at the discretion of the Departmental Graduate Program Committee. The Departmental Graduate Program Committee examines each application before the student is proposed to the School of Graduate Studies for admission into the program.

### Degree Requirements

MSc students are required to complete successfully six taught courses plus a seminar course. The minimum course work requirements (assuming all undergraduate background requirements have been met) are:

- Microeconomic Theory (ECON\*3710 or ECON\*6000)
- Macroeconomic Theory (ECON\*4810 or ECON\*6020)
- One graduate course in quantitative methods selected from:
  - Mathematical Programming (AGEC\*6360)
  - Econometrics (ECON\*6050) or (ECON\*6140)
  - Multivariate Statistics (COST\*6060)
- Two graduate courses in agricultural economics
- One additional graduate course
- One-credit seminar course (AGEC\*6800).

### Areas of study in the Program

The fields in which the Master's program at Guelph specializes are natural resource and environmental economics, food business economics and the economics of agricultural markets. For students wishing to specialize in one of these fields, the following course combinations are recommended:

#### Natural Resource and Environmental Economics:

- Microeconomic Theory (ECON\*3710 or ECON\*6000)
- Macroeconomic Theory (ECON\*4810 or ECON\*6020)
- One graduate course in quantitative methods selected from:
  - Mathematical Programming (AGEC\*6360)
  - Econometrics (ECON\*6050 or ECON\*6140)
  - Multivariate Statistics (COST\*6060)
- Renewable Resource Economics (AGEC\*6610)
- Environmental Economics (ECON\*6800)
- One-credit seminar course (AGEC\*6800)

#### Food Business Economics:

- Microeconomic Theory (ECON\*3710 or ECON\*6000)
- Macroeconomic Theory (ECON\*4810 or ECON\*6020)
- One graduate course in quantitative methods selected from:
  - Mathematical Programming (AGEC\*6360)
  - Econometrics (ECON\*6050 or ECON\*6140)
  - Multivariate Statistics (COST\*6060)
- Three of the following:
  - Marketing Management (AGEC\*6110)
  - Food and Agribusiness Strategic Management (AGEC\*6140)
  - Future and Options (AGEC\*6250)
  - Operations Management (AGEC\*6410)
- One-credit seminar course (AGEC\*6800)

#### Economics of Agricultural Markets:

- Microeconomic Theory (ECON\*3710 or ECON\*6000)
- Macroeconomic Theory (ECON\*4810 or ECON\*6020)
- One graduate course in quantitative methods selected from:
  - Mathematical Programming (AGEC\*6360)
  - Econometrics (ECON\*6050 or ECON\*6140)
  - Multivariate Statistics (COST\*6060)
- Two of the following:
  - Futures and Options (AGEC\*6250)
- One additional graduate course
- One-credit seminar course (AGEC\*6800)

Note that students electing to take certain courses that are offered to MBA students in the department may be required by the Departmental Graduate Program Committee to complete successfully more than six taught courses.

### PhD Program

The PhD program in agricultural economics focuses on three major areas of emphasis:

- Natural resource and environmental economics
- Food business economics
- Economics of agricultural markets

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 economic 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 are admitted to the PhD program in the fall of each year. 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.

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 11 taught courses that prepare them for the various elements of comprehensive examination. However, students that are able to demonstrate satisfactory level of competence in any of these requirements may have these course requirements adjusted in accordingly, subsequent to evaluation and the decision of the Departmental Graduate Program Committee.

All students must complete the following microeconomic theory and economic research methods courses:

#### Microeconomic Theory:

|           |                         |
|-----------|-------------------------|
| ECON*6000 | Microeconomic Theory I  |
| ECON*6010 | Microeconomic Theory II |

#### Economic Research Methods:

|           |                              |
|-----------|------------------------------|
| AGEC*6360 | Mathematical Programming     |
| AGEC*6100 | The Methodology of Economics |

Plus ONE from the following:

|           |                                     |
|-----------|-------------------------------------|
| ECON*6050 | Introduction to Econometric Methods |
| ECON*6140 | Econometrics I                      |
| COST*6060 | Multivariate Research Methods       |

In addition, students must complete the following courses related to their chosen area of specialization:

|           |   |
|-----------|---|
| AGEC*6400 | Advanced Topics in Agricultural Economics |
|-----------|---|

Plus FIVE from:

|           |                                     |
|-----------|-------------------------------------|
| ECON*6700 | Industrial and Market Organization  |
| AGEC*6250 | Futures and Options                 |
| ECON*6300 | International Trade Theory          |
| ECON*6800 | Environmental Economics             |
| ECON*6020 | Macroeconomics I                    |
| ECON*6350 | Economic Development                |
| AGEC*6600 | Agriculture in Economic Development |

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

Students are required to complete their course work by the end of the fourth semester.

### Qualifying Examination

The required taught courses are intended to prepare students for the qualifying examination. The PhD qualification examination process evaluates a student's readiness to conduct independent research in Food, Agricultural and Resource Economics at the PhD level, including:

1. Mastery of the breadth and depth of the subject matter.
2. Ability to integrate the material derived from his or her studies.
3. Ability and promise in research.

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

Before proceeding to the qualifying examination students are expected to complete successfully pre-qualifying examinations in microeconomic theory and in food, agricultural and resource economics, which aim to assess a student's understanding of key theoretical and empirical concepts. Students are allowed two attempts at each of these pre-qualifying examinations. Students that fail any one of these pre-qualifying examinations will not be permitted to proceed to the qualifying examination.

The qualifying examination consists of a written thesis proposal and an oral defence of this proposal. Students will be permitted two attempts at the qualifying examination.

### Interdepartmental Programs

#### International Development Studies Collaborative MA/MSc Program

The Department of Food, Agricultural and Resource Economics participates in the Collaborative International Development Studies (CIDS) program. Please consult the Collaborative International Development Studies listing for a detailed description of the

MA/MSc collaborative program including the special additional requirements for each of the participating departments.

### Resource and Environmental Economics PhD Program

A PhD in Resource and Environmental Economics is offered collaboratively by the Departments of Economics and Food, Agricultural and Resource Economics. Students apply to and enroll in one of these departments and the degree is awarded in the subject area of that department. This program is described in detail under Resource and Environmental Economics.

### Courses

#### Production Economics

##### AGEC\*6360 Mathematical Programming W [0.50]

A study of the algebra, assumptions and economic logic of important optimizing techniques and their application to problems in quantitative economics.

##### AGEC\*6430 Case Studies in Farm Management U [0.50]

Identification of problems and opportunities on selected representative farms; use of selected management tools for diagnostic analysis and planning; evaluation of relevant management strategies based on the concept of management as a continuous decision-making process.

##### AGEC\*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, ECON\*2770

#### Agricultural Policy and Trade

##### AGEC\*6600 Agriculture in Economic Development F [0.50]

The course is concerned with the role of agriculture as a source of food, fibre and employment in developing countries. The interaction between agriculture and other sectors of the economy and other countries is also examined.

*Prerequisite(s):* ECON\*1050 and ECON\*1100

##### AGEC\*6910 Applied Policy Analysis I F [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):* ECON\*3710

##### AGEC\*6920 Applied Policy Analysis II F [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):* AGEC\*6910

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

##### AGEC\*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.

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

##### AGEC\*6940 Food Firms, Consumers and Markets II F [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):* AGEC\*6930, ECON\*3710

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

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

*Prerequisite(s):* ECON\*3710, AGEC\*6910

**Natural Resource Economics****AGEC\*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.

**AGEC\*6960 Natural Resource Economics II F [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):* ECON\*6010, AGECE\*6950

**Agribusiness Management****AGEC\*6070 Research Methods for Managers F [0.50]**

The objective of the course is to provide students with a working knowledge of quantitative and qualitative techniques used in the analysis of management problems. The emphasis is on the application and interpretation of quantitative and qualitative methods rather than on theoretical background.

**AGEC\*6110 Marketing Research W [0.50]**

A study of marketing research analysis in agribusiness firms, with emphasis on the marketing research function and the application of quantitative problem solving techniques.

**AGEC\*6120 Marketing Management F [0.50]**

A study of marketing decision-making in agribusiness firms, with emphasis on the formulation of strategic marketing plans

**AGEC\*6130 Special Topics in Financial Management U [0.50]**

An advanced course for students who wish to explore current and future topics in financial management, trends and problems in financial management, and capital and investment theory related to food and agribusiness firms.

**AGEC\*6140 Food and Agribusiness Strategic Management U [0.50]**

An advanced course requiring the application of conceptual, analytical, problem identification, and problem solving skills to develop organizational strategy. Food, agribusiness and other cases are used to explore the development and implementation of strategy and to assess the dynamic relationship between strategy and competition.

**AGEC\*6180 Financial and Managerial Accounting F [0.50]**

This course emphasizes the gathering and use of financial information to facilitate effective financial and management decisions. Cases are used to approach the subject from the perspective of the user of accounting information rather than that of the supplier.

**AGEC\*6200 Financial Management W [0.50]**

This course takes the viewpoint of the senior financial officer of a commercial enterprise. The focus is on the management of cash, accounts receivable, inventories and capital assets, as well as on the sourcing of funds through short-term liabilities, long-term debt and owners' equity.

*Prerequisite(s):* AGECE\*6180

*Restriction(s):* Non MBA students only by permission of instructor

**AGEC\*6230 Food and Agribusiness Economics and Policy W [0.50]**

An analysis of economic and policy issues relevant for food and agribusiness managers in affluent economies, with emphasis on the economic and policy environment that exists within North America.

**AGEC\*6250 Futures and Options W [0.50]**

The theory and application of futures, options and other derivative securities for marketing, risk management, and investment purposes. Emphasis is placed on application of the instruments to real business situations, and on the development and implementation of trading strategies designed to meet the precise needs of specific business clients.

**AGEC\*6260 Managing Business Risk U [0.50]**

This course is designed to help students recognize, measure and understand different components of business risk. Case studies are used to explore and evaluate risk management alternatives and to implement and monitor risk mitigating strategies. Corporate responsibility in relation to risk management is also addressed.

**AGEC\*6410 Operations Management I S [0.50]**

Overview of the management problems involved in planning, operating and controlling the systems used in operations, with emphasis on farm and agribusiness applications.

**AGEC\*6750 Problems in Agricultural Business F [0.50]**

Seminar course with industry speakers, in preparation to AGECE\*6760, and leading to a formal business project proposal.

**Other Courses****AGEC\*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.

**AGEC\*6760 Major Project in Food and Agribusiness Management U [0.50]**

Management project leading to a referenced technical report on some aspect of food and agribusiness management. Completion of this course requires a formal presentation of the project to faculty and students.

**AGEC\*6100 The Methodology 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.

**AGEC\*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.

**AGEC\*6800 Seminar in Agricultural Economics S [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.