



FARE*2700 Survey of Natural Resource Economics

Fall 2020

Section(s): C01

Department of Food, Agricultural and Resource Economics

Credit Weight: 0.50

Version 1.00 - August 25, 2020

1 Course Details

1.1 Calendar Description

This course examines how humans, within a society, allocate natural resources - e.g., water, land, forests, and fisheries. Economic concepts and methods provide the basis for discussing and understanding both the use and misuse of natural resources.

Pre-Requisites: 1 of ECON*1050, FARE*1040, FARE*1400

1.2 Course Description

This course examines how humans, within a society, allocate natural resources. Economic concepts and methods provide the basis for discussing and understanding both the use and misuse of natural resources.

1.3 Timetable

Monday, Wednesday, and Friday; 1:30-2:20 PM; AD-S, Virtual (CourseLink and Zoom)

1.4 Final Exam

Take-Home Exam: Fri, Dec 4, 2:20 PM - Mon, Dec 7, 11:59 PM

2 Instructional Support

2.1 Instructional Support Team

Instructor: Qin Xu Ph.D

Email: xuq@uoguelph.ca
Office Hours: Use Zoom. Wednesday 2:30 PM - 4:30 PM, or by appointment.

2.2 Teaching Assistants

Name	Email	Office Location and Office Hours
TBA	TBA	TBA
TBA	TBA	TBA
TBA	TBA	TBA

2.3 Class Sites

This course will be delivered entirely online.

- This course will use **CourseLink** to post announcements and course materials, submit assignments, take quizzes and exams, check grades, discuss questions, and access Zoom meetings.
- This course will use **Zoom** for lectures and office hours.

2.4 Communicating with Your Instructor

During the course, your instructor will interact with you on various course matters on the course website using the following ways of communication:

- **Announcements:** The instructor will use **Announcements** on the Course Home page on **CourseLink** to provide you with course reminders and updates. Please check this section frequently for course updates from your instructor.
- **Ask Your Instructor Discussion:** Use the **Discussion** forum on **CourseLink** to ask questions of your instructor about the content or course-related issues with which you are unfamiliar. If you encounter difficulties, the instructor and teaching assistants are here to help you. Please post general course-related questions to the discussion forum so that all students have an opportunity to review the response. To access this

discussion forum, select Discussions from the Tools dropdown menu.

- **Email:** If you have a conflict that prevents you from completing course requirements, or have a question concerning a personal matter, you can send your instructor a private message by **email**. The instructor will attempt to respond to your email within 48 hours.
- **Video Call/Office Hours:** If you have a complex question you would like to discuss with your instructor, you may book a video meeting in Zoom. Video meetings depend on availability and are booked on a first-come, first-served basis.

2.5 Netiquette Expectations

The course website is considered the classroom and the same protections, expectations, guidelines, and regulations used in face-to-face settings apply. Inappropriate behaviour will not be tolerated. Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students;
- Using offensive language;
- Copying or presenting someone else's work as your own;
- Adapting information from the Internet without using proper citations or references;
- Buying or selling term papers or assignments;
- Posting or selling course materials to course notes websites;
- Having someone else complete your quiz or completing a quiz for/with another student;
- Stating false claims about lost quiz answers or other assignment submissions;
- Threatening or harassing a student or instructor;
- Discriminating against fellow students, instructors, and/or TAs;
- Using the course website to promote profit-driven products or services;
- Attempting to compromise the security or functionality of the learning management system; and
- Sharing your username and password.

3 Learning Resources

3.1 Required Resources

Textbook (Textbook)

The textbook for this class is *Environmental and Natural Resource Economics* by Tom Tietenberg and Lynne Lewis. We will be using the 11th edition, which is available for purchase at the University Bookstore. One copy of the textbook and an electronic textbook for 3 persons (i.e. only 3 persons can use the textbook online at the same time) has been placed on reserve at the library, as well as copies of the 10th, 9th, and 8th editions, which

can be used interchangeably should the 11th edition be unavailable. A reading guide for the older textbook editions, with page numbers corresponding to the 11th edition chapters, has been provided on CourseLink.

3.2 Additional Resources

Other Resources (Other)

Some FAREtalk podcasts will be assigned over the course of the semester, and those are available on the FARE department website here: <https://www.uoguelph.ca/fare/institute/podcasts>. Direct links to each podcast will also be made available on CourseLink.

Any additional readings will be made available online through CourseLink, or through the library course reserve system.

3.3 Course Technologies and Technical Support

System and Software Requirements

This course will use a variety of technologies including;

- *CourseLink*
- *Zoom*
- *Respondus LockDown Browser*

To help ensure you have the best learning experience possible, please review the list of system and software requirements.

<https://opened.uoguelph.ca/student-resources/system-and-software-requirements>

CourseLink System Requirements

You are responsible for ensuring that your computer system meets the necessary system requirements. Use the browser check tool to ensure your browser settings are compatible and up to date. (Results will be displayed in a new browser window).

<http://spaces.uoguelph.ca/ed/system-requirements/>

<https://courselink.uoguelph.ca/d2l/systemCheck>

Course Technologies

CourseLink

This course is being offered using CourseLink (powered by D2L's Brightspace), the University of Guelph's online learning management system (LMS). By using this service, you agree to

comply with the University of Guelph's Access and Privacy Guidelines. Please visit the D2L website to review the Brightspace privacy statement and Brightspace Learning Environment web accessibility standards.

<http://www.uoguelph.ca/web/privacy/>

<https://www.d2l.com/legal/privacy/>

<https://www.d2l.com/accessibility/standards/>

Technical Support - CourseLink

If you need any assistance with the software tools or the CourseLink website, contact CourseLink Support.

Email: courselink@uoguelph.ca

Tel: 519-824-4120 ext. 56939 Toll-Free (CAN/USA): 1-866-275-1478

Support Hours (Eastern Time) - CourseLink:

Monday thru Friday: 8:30 am–8:30 pm

Saturday: 10:00 am–4:00 pm

Sunday: 12:00 pm–6:00 pm

Zoom

This course will use Zoom for lectures, office hours, and one-on-one meetings. Check your system requirements to ensure you will be able to participate. As a student, you are responsible for learning how to use Zoom and its features.

<https://opened.uoguelph.ca/student-resources/system-and-software-requirements>

Technical Skills

As part of your learning experience, you are expected to use a variety of technologies for assignments, lectures, teamwork, and meetings. In order to be successful in this course you will need to have the following technical skills:

- Manage files and folders on your computer (e.g., save, name, copy, backup, rename, delete, and check properties);
- Install software, security, and virus protection;
- Use office applications (e.g., Word, PowerPoint, Excel, or similar) to create documents;
- Be comfortable uploading and downloading saved files;
- Communicate using email (e.g., create, receive, reply, print, send, download, and open attachments);
- Navigate the CourseLink learning environment and use the essential tools, such as Dropbox, Quizzes, Discussions, and Grades (the instructions for this are given in your course);
- Access, navigate, and search the Internet using a web browser (e.g., Firefox, Internet Explorer); and
- Perform online research using various search engines (e.g., Google) and library databases.

Contact your course instructor if you need support with any of the above.

3.3 Library Access

As a student, you have access to the University of Guelph's library collection, including both physical and electronic materials. For information on checking out or couriering physical library items, accessing electronic journals and returning items to the library, visit the library's website.

If you are studying off-campus and would like to access the library's electronic resources, use the Off-Campus Login and login using your Single Sign-On credentials or using your last name and library barcode.

<https://www.lib.uoguelph.ca/>

<https://www.lib.uoguelph.ca/campus-login>

Ares

For this course, you will be required to access course reserve materials through the University of Guelph McLaughlin Library.

For further instructions on accessing reserve resources, visit How to Get Course Reserve Materials. <https://www.lib.uoguelph.ca/find/course-reserves-ares/how-get-course-reserve-material>

If at any point during the course you have difficulty accessing reserve materials, please contact the e-Learning Operations and Reserve Services staff at:

Tel: 519-824-4120 ext. 53621

Email: libres2@uoguelph.ca

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Understand and explain key economic concepts.
 2. Appreciate the role of economic theory in research and policy development.
 3. Normatively, graphically and mathematically describe the optimal allocations of resources from an economic perspective.
 4. Apply key economic concepts to issues surrounding the use of water, fisheries and forestry resources.
 5. Apply economic concepts to critically examine natural resource issues both domestically and internationally.
-

5 Teaching and Learning Activities

This course will use **Zoom** for lectures (**i.e. synchronously**).

- To attend the lectures at Zoom, students should log in to their **CourseLink** first. Then, students select the Content module => Zoom submodule => Zoom, and then select the Zoom meeting for a designated date to attend the lecture. If students attend the Zoom meeting without login to their CourseLink, they would be required to enter the password of the meeting. The purpose of using a password is to avoid unexpected participants, so the password won't be given. Students should attend the Zoom meetings through their CourseLink (the password is not required through CourseLink).
- The online lectures are composed of presenting PowerPoint slides and Q&A sessions. During lectures, to avoid the possibility of disconnection, all students are required to **close their cameras and microphone**. If you have a question, please **type in your questions in the chat**. The instructor will answer your questions when a topic has been covered in the presentation. For every 15-20 mins, the instructor will give students time to type in questions and the instructor will answer those questions (i.e. Q&A sessions).

5.1 Lecture

Fri, Sep 11

Topics: Introduction to the Course

Reading: Course Outline

Mon, Sep 14

Topics: Unit 1: Thinking about the Future

Reading: Ch.1 pp. 1-13

Wed, Sep 16 - Wed, Sep 23

Topics: Unit 2: An Economic Approach

Reading: Ch.2 pp.17-22; Ch.3 pp.45-55.

Fri, Sep 25

Topics: Lab 1 in Class

Mon, Sep 28 - Wed, Sep 30

Topics: Unit 3: Valuation Methods

Reading: Ch.4 pp.73-102

Fri, Oct 2

Topics: Lab 1 assignment is due by the start of class (i.e. 1:30 pm).

Lab 1 review

Mon, Oct 5 - Fri, Oct 9

Topics: Unit 4: Property Rights Approach

Reading: Ch.2 pp.23-42

Mon, Oct 12

Topics: Holiday - No Class

Wed, Oct 14

Topics: Unit 5: Dynamic Efficiency and Sustainability

Reading: Ch.5 pp.107-118

Fri, Oct 16

Topics: Lab 2 in Class

Mon, Oct 19 - Wed, Oct 21

Topics: Unit 5: Dynamic Efficiency and Sustainability (Continued)

Reading: Ch.5 pp.107-118

Fri, Oct 23

Topics: Lab 2 assignment is due by the start of class (i.e. 1:30 pm)

Lab 2 review

Mon, Oct 26

Topics: Midterm #1 Review

Wed, Oct 28

Topics: Midterm Exam #1 - In Class

Fri, Oct 30 - Fri, Nov 6

Topics: Unit 6: Water

Reading: Ch.9 pp.197-229

Mon, Nov 9 - Wed, Nov 11

Topics: Unit 7: Forestry

Reading: Ch.11 pp.251-269

Fri, Nov 13

Topics: Lab 3 in Class

Mon, Nov 16 - Wed, Nov 18

Topics: Unit 8: Fisheries

Reading: Ch.12 pp.273-302

Fri, Nov 20

Topics: Lab 3 assignment is due by the start of class (i.e. 1:30 pm)

Lab 3 review

Mon, Nov 23

Topics: Unit 8: Fisheries (Continued)

Reading: Ch.12 pp.273-302

Wed, Nov 25

Topics: Midterm #2 Review

Fri, Nov 27

Topics: Midterm Exam #2 - In Class

Mon, Nov 30 - Fri, Dec 4

Topics: Class content TBD

6 Assessments

6.1 Marking Schemes & Distributions

Name	Scheme A (%)
Online Quizzes	15
Lab Assignments (take-home)	30
Midterm Exam #1	20
Midterm Exam #2	20
Final Take-Home Exam	15
Total	100

6.2 Assessment Details

Online Quizzes (15%)

Date: CourseLink

Unit 1 Quiz (1%) Due: Sept. 21, 2020

Unit 2 Quiz (2%) Due: Sept. 30, 2020

Unit 3 Quiz (1%) Due: Oct. 7, 2020

Unit 4 Quiz (2%) Due: Oct. 16, 2020

Unit 5 Quiz (2%) Due: Oct. 26, 2020

Unit 6 Quiz (3%) Due: Nov. 13, 2020

Unit 7 Quiz (2%) Due: Nov. 18, 2020

Unit 8 Quiz (2%) Due: Nov. 25, 2020

Lab Assignments (take-home) (30%)

Due: CourseLink

Lab assignments should be submitted to **Dropbox** on CourseLink by the beginning of class (1:30 pm) on the due date. Late submission will not be accepted.

- Lab 1 take-home assignment (10%) Due: Oct. 2, 2020
- Lab 2 take-home assignment (10%) Due: Oct. 23, 2020
- Lab 3 take-home assignment (10%) Due: Nov. 20, 2020

Midterm Exam #1 (20%)

Date: Wed, Oct 28, 1:30 PM - 2:20 PM, CourseLink

Midterm Exam #2 (20%)

Date: Fri, Nov 27, 1:30 PM - 2:20 PM, CourseLink

Final Take-Home Exam (15%)

Date: Fri, Dec 4, 2:20 PM - Mon, Dec 7, 11:59 PM, CourseLink

The take-home exam should be submitted to Dropbox on CourseLink before the deadline.

The late penalties will be applied as follows:

- 40%age points for the first 24 hours after the deadline;
- 30%age points for every subsequent 24 hours.

6.3 Online Quizzes

Each unit of the course has a corresponding online quiz available on CourseLink. The online quizzes are designed to improve students' understanding of key economic concepts. Each unit quiz will become available at 8 am on the first lecture day of that unit, and close at 11:59 pm on the due date. You are allowed three attempts at each quiz. Grading weights vary based on the relative length of each unit, as specified above.

6.4 Labs

Labs in this course are designed to train students' capacity to normatively, graphically and mathematically describe the optimal allocations of resources from an economic perspective. These assignments will reemphasize material covered in class. There are three labs in this course. Each lab has two parts: in-class practice questions and a take-home assignment. The corresponding in-class practice questions will be posted on CourseLink two days before each lab. In each lab, the instructor will explain the solution to the in-class practice questions. After each lab, the take-home assignment will be posted on CourseLink. The completed assignment should be submitted to **Dropbox** on CourseLink by the beginning of class on the due date. Late submission will not be graded. Turnitin will be used to check for plagiarism/copying of assignment content.

Please be aware of the following:

- Students are welcome to discuss lab assignments with each other, but submitted work should reflect one's individual understanding of the material and should be written up independently.
- Lab assignments (take-home) should be turned in by the start of class on the assigned dates (see the class schedule).
- Correct answers to most of the questions will be posted on CourseLink (answers to discussion questions will not be posted). It is your responsibility to make sure that you review and understand the answers.
- If you are having trouble understanding the questions/answers provided, meet the instructor or a TA during office hours for further support.

7 Course Statements

7.1 Dropbox Submissions

Assignments should be submitted electronically via the online **Dropbox** tool. When submitting your assignments using the **Dropbox** tool, do not leave the page until your assignment has successfully uploaded. To verify that your submission was complete, you can view the submission history immediately after the upload to see which files uploaded successfully. The system will also email you a receipt. Save this email receipt as proof of submission.

Be sure to keep a back-up copy of all of your assignments in the event that they are lost in transition. In order to avoid any last-minute computer problems, your instructor strongly recommends you save your assignments to a cloud-based file storage (e.g., OneDrive), or send to your email account, so that should something happen to your computer, the assignment could still be submitted on time or re-submitted.

It is your responsibility to submit your assignments on time as specified on the Schedule. Be sure to check the technical requirements and make sure you have the proper computer, that you have a supported browser, and that you have reliable Internet access. Remember that **technical difficulty is not an excuse not to turn in your assignment on time**. Don't wait until the last minute as you may get behind in your work.

If, for some reason, you have a technical difficulty when submitting your assignment electronically, please contact your instructor or CourseLink Support.

<http://spaces.uoguelph.ca/ed/contact-us/>

7.2 Late Policy

Lab assignments should be submitted to the **Dropbox** tool by the beginning of class on the specified date (see the class schedule), unless an alternative arrangement is made with the instructor prior to the deadline. The instructor will review the solutions to the lab assignment questions on the same day. So, late submission will not be accepted and will receive a grade of zero.

The take-home exam should be submitted to the **Dropbox** tool by the deadline specified in the Assessment details. Late penalties will be applied as follows:

- 40%age points for the first 24 hours after the deadline;
- 30%age points for every subsequent 24 hours.

Extensions will be considered for medical reasons or other extenuating circumstances. If you require an extension, discuss this with the instructor as soon as possible and well before the due date. Barring exceptional circumstances, extensions will not be granted once the due date has passed. These rules are not designed to be arbitrary, nor are they inflexible. They are designed to keep you organized, to ensure that all students have the same amount of time to work on assignments, and to help to return marked materials to you in the shortest possible time.

7.3 Grades and Feedback

Unofficial assessment marks will be available in the **Grades** tool of the course website.

Your instructor and teaching assistants will attempt to have grades posted online within 2 weeks of the submission deadline, if the assignment was submitted on time. Once your assignments are marked you can view your grades on the course website by selecting **Grades** from the **Tools** dropdown menu on the navbar. Your course will remain open to you for seven days following the last day of the final exam period.

University of Guelph students can access their final grade by logging into WebAdvisor (using your U of G central ID).

<https://webadvisor.uoguelph.ca>

8 University Statements

8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for

Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance

and not later than the 40th Class Day.

For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

8.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community-faculty, staff, and students-to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

8.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars
<https://www.uoguelph.ca/academics/calendars>

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings and academic schedules. Any such changes will be announced via CourseLink and/or class email. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

8.10 Illness

The University will not require verification of illness (doctor's notes) for the fall 2020 or winter 2021 semesters.
