POPM*6350 (DE) F16 - Safety of Foods of Animal Origin

Course Outline

Introduction

The goals of this course are to study the principles and practice of food safety, with emphasis on foods of animal origin. The detection, epidemiology, human health risk and control of hazards in foods will be discussed. This course will be multidisciplinary, with emphasis on the microbiological, chemical, esthetic and toxic hazards in foods. This course is designed to assist individuals engaged in food safety activity in protecting the public health from hazards in foods.

Graduate Calendar Description

POPM*6350 Safety of Foods of Animal Origins F [0.50]. The detection, epidemiology, human health risk, and control of hazards in food of animal origin.

About the Instructor

My name is Scott McEwen. I obtained my DVM and Doctor of Veterinary Science degrees from the University of Guelph. I am currently a Professor in the Department of Population Medicine, Ontario Veterinary College. My research focuses on the epidemiology of foodborne infections in food animal populations, particularly E. coli and antibiotic resistant organisms, but also Salmonella and other pathogens. Since 1986 I have taught food safety to veterinary students and graduate students in a variety of degree programs and have been the principal research advisor of over 50 graduate students. I am author or co-author of over 240 publications in refereed scientific journals, mostly related to food safety, and have delivered invited research presentations in nine countries. I serve on several national and international public health and food safety committees and boards.
Objectives

At the end of this course, graduate students will be able to:

1. List important microbiological, chemical and physical food safety hazards that can occur in foods, and describe their implications to human health.

2. Identify and describe the sources of food safety hazards in foods, factors affecting multiplication or reduction in exposure to humans, and methods of inspection and control.

3. Analyse and interpret basic qualitative food safety data, draw conclusions and formulate recommendations.

4. Work with others to evaluate the food safety perspectives of various participants in the farm-to-fork continuum and to synthesize optimal food safety strategies.

5. Address basic food safety problems through analysis and research. Obtain, critically assess and synthesize knowledge from relevant sources in order to identify and prioritize potential solutions, and effectively communicate the findings and recommendations in written format.

Resources

Required textbook:


http://trellis3.tug-libraries.on.ca/

Required readings:

For this course you will be required to access electronic resources through the University of Guelph McLaughlin Library. To access these items, visit eReserve in the top Navbar. Note that you will need your Central Login ID and password in order to access items on reserve.

For further instructions on accessing reserve resources, visit How to Get Course Reserve Materials.

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

References to several websites are provided in the course weekly units.

Learning Strategies

The course is available in distance format only. It is divided into 12 units that correspond to weeks in the semester. Each unit contains learning objectives which are achieved by reading the assigned book chapters and articles, performing the specific activities, participating in weekly online discussions, and by completing the individual and group assignments. The unit activities and assignments include exercises to develop skills in problem identification and solving, qualitative risk characterization, data analysis, synthesis and consensus building.

Course Structure

<table>
<thead>
<tr>
<th>Week</th>
<th>Unit Title</th>
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<tbody>
<tr>
<td>1</td>
<td>General overview and production chain for foods of animal origin</td>
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<tr>
<td>2</td>
<td>Farm to fork food safety</td>
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<tr>
<td>3</td>
<td>Characterization of food risks</td>
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<tr>
<td>4</td>
<td>Food safety surveillance systems</td>
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<tr>
<td>5</td>
<td>Food safety policy</td>
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<tr>
<td>6</td>
<td>Biological hazards - bacteria</td>
</tr>
<tr>
<td>7</td>
<td>Biological hazards - parasites, viruses and prions</td>
</tr>
<tr>
<td>8</td>
<td>Chemical hazards</td>
</tr>
<tr>
<td>9</td>
<td>System for risk management - pre-harvest</td>
</tr>
<tr>
<td>10</td>
<td>systems for risk management - post harvest; slaughter &amp; primary processing; raw meat &amp; poultry</td>
</tr>
<tr>
<td>11</td>
<td>Systems for risk management – post-harvest: further processing, retail &amp; food service</td>
</tr>
<tr>
<td>12</td>
<td>Integrated pathogen reduction programs and international programs</td>
</tr>
</tbody>
</table>

Discussion Use and Expectations

1. **Introductions**: Here you will introduce yourself to your class. Tell us what you hope to learn by taking this course and anything else that you are comfortable sharing.

2. **Questions and Answers**: This is where you go to ask me questions.
3. **General Discussion**: Use this section to ask food safety questions of classmates, raise issues of food safety interest to the class, or discuss food safety issues not raised in course modules. For module-specific matters, use the weekly discussion sections.

4. **A Series of Weekly Discussions**: Use these Discussions to answer and discuss the weekly activity questions. I will monitor your postings and provide my answers at the end of each week.

5. **Expert Group, Policy Group and Summary Postings**: You will use these sections for your group assignment beginning week 4. I will assign you to groups prior to week 4.

6. **Coffee Shop**: Relax, chat and talk about non-course related things.

7. **Test**: Use this Discussion to learn about the course conferencing system, and to practice sending and receiving messages. Test is a practice Discussion common to all web-based courses running this semester.

Information on navigating and using the Discussions link is available in the Help page located in the top navigation page.

The University of Guelph has an [Acceptable Use Policy](#) which you are expected to adhere to.

**Graduate Policies and Resources**

As a student of the University of Guelph, it is important for you to understand your rights and responsibilities and the academic rules and regulations that you must abide by.

If you are a registered **University of Guelph Degree Student**, consult the [Graduate Calendar](#) for the rules, regulations, curricula, programs and fees for current and previous academic years.

If you are an **Open Learning Program Student**, consult the [Open Learning Program Calendar](#) for information about University of Guelph administrative policies, procedures and services.

**Email Communication**

**University of Guelph Degree Students**

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

Check your email account (the account you provided upon registration) regularly for important communications, as this is the primary conduit by which the Open Learning and Educational Support will notify you of events, deadlines, announcements or any other official information.

When You Cannot Meet Course Requirements

When you find yourself unable to meet an in-course requirement due to illness or compassionate reasons, please advise your course instructor (or designated person such as a teaching assistant) in writing, with your name, ID number and email contact.

University of Guelph Degree Students

See the Graduate Calendar for information on regulations and procedures for Academic Consideration.

Open Learning Program Students

Please refer to the Open Learning Program Calendar for information on regulations and procedures for requesting Academic Consideration.

Drop Date

University of Guelph Degree Students

The last date to drop one-semester courses, without academic penalty, is indicated in the Schedule of Dates section of the Undergraduate Calendar. See the Graduate Calendar for regulations and procedures for Dropping Courses.

Open Learning Program Students

Please refer to the Open Learning Program Calendar.
Copies of Out-of-Class Assignments

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

Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment.

University of Guelph Degree Students

Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Student Accessibility Services (SAS) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208, email SAS or visit the SAS website.

Open Learning Program Students:

If you are an Open Learning program student who requires academic accommodation, please contact the Academic Assistant to the Director. Please ensure that you contact us before the end of the first week of your course (every semester) in order to avoid any delays in support. Documentation from a health professional is required for all academic accommodations. Please note that all information provided will be held in confidence.

If you require textbooks produced in an alternate format (e.g., DAISY, Braille, large print or eText), please contact the Academic Assistant to the Director at least two months prior to the course start date. If contact is not made within the suggested time frame, support may be delayed. It is recommended that you refer to the course outline before beginning your course in order to determine the required readings.

The provision of academic accommodation is a shared responsibility between OpenEd and the student requesting accommodation. It is recognized that academic accommodations are intended to “level the playing field” for students with disabilities.
**Academic Misconduct**

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 discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

The [Academic Misconduct Policy](#) is detailed in the Graduate Calendar.

**Acceptable Use**

The University of Guelph has an [Acceptable Use Policy](#), which you are expected to adhere to.

**Copyright**

All content within this course is copyright protected. Third party copyrighted materials (such as book chapters and articles) have either been licensed for use in this course, or have been copied under an exception or limitation in Canadian Copyright law.

The fair dealing exemption in Canada's Copyright Act permits students to reproduce short excerpts from copyright-protected materials for purposes such as research, education, private study, criticism and review, with proper attribution. Any other copying, communicating, or distribution of any content provided in this course, except as permitted by law, may be an infringement of copyright if done without proper license or the consent of the copyright owner. Examples of infringing uses of copyrighted works would include uploading materials to a commercial third party web site, or making paper or electronic reproductions of all, or a substantial part, of works such as textbooks for commercial purposes.

Students who upload to CourseLink copyrighted materials such as book chapters, journal articles, or materials taken from the Internet, must ensure that they comply with Canadian Copyright law or with the terms of the University’s electronic resource licenses.

For more information about students' rights and obligations with respect to copyrighted works, see [Fair Dealing Guidance for Students](#).
Grades

The assignment of grades at the University of Guelph is based on clearly defined standards, which are published in the Graduate Calendar for the benefit of faculty and students.

Grades Schedule

In courses, which comprise a part of the student's program, standings will be reported according to the following schedule of grades:

- A+ 90-100%
- A 85-89%
- A- 80-84%
- B+ 77-79%
- B 73-76%
- B- 70-72%
- C+ 67-69%
- C 65-66%
- F 0-64%

The minimum passing grade is 65%.

The Grades Schedule can be referenced in the Graduate Calendar.

Grade Interpretation

The definitions for each of the numerical grade range (letter grades) is as follows:

90-100 (A+) Outstanding. The student demonstrated a mastery of the course material at a level of performance exceeding that of most scholarship students and warranting consideration for a graduation award.

80-89 (A- to A) Very Good to Excellent. The student demonstrated a very good understanding of the material at a level of performance warranting scholarship consideration.
70-79 (B) **Acceptable to Good.** The student demonstrated an adequate to good understanding of the course material at a level of performance sufficient to complete the program of study.

65-69 (C) **Minimally Acceptable.** The student demonstrated an understanding of the material sufficient to pass the course but at a level of performance lower than expected from continuing graduate students.

0-64 (F) **Fail.** An inadequate performance.

Further information on [Grade Interpretation](#) is outlined in the Graduate Calendar.

**Graduate Student Responsibilities**

From the choice of Advisor, choice of research project and through to degree completion, graduate students must recognize that they carry the primary responsibility for their success. The responsibilities assigned to Advisors, Advisory Committees and Departments provide the framework within which students can achieve success. Students should take full advantage of the knowledge and advice that the Advisor and Advisory Committee have to offer and make the effort to keep the lines of communication open. The [Graduate Student Responsibilities](#) are located in the Graduate Calendar.

**General Regulations**

Graduates students are expected to be familiar with the [General Regulations](#) in the Graduate Calendar, including those related to university-wide policies on admission, registration, graduation, theses, fees and other subjects of importance to graduate students.

**Plagiarism Detection Software**

Students should be aware that faculty have the right to use software to aid in the detection of plagiarism or copying and to examine students orally on submitted work. For students found guilty of academic misconduct, serious penalties, up to and including suspension or expulsion from the University can be imposed.
Recording of Materials

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

Religious Holidays

Should a student need to miss scheduled tests, mid-term examinations, final examinations, or requirements to attend classes and participate in laboratories for religious reasons, please advise the instructor within two weeks of the distribution of this course outline so that alternate arrangements can be made.

Problems, Questions, Comments

Instructor

Scott McEwen

Office Location: Room 201, OVC Clinical Research Building, University of Guelph

Email: smcewen@uoguelph.ca

Telephone: 519-824-4120 ex. 54751

Office Hours: 08:30-4:45 Monday-Friday

Telephone Policies: Call anytime; leave a message if no answer.

Appointments Necessary for telephone or other? No, but best to email first.

CourseLink Technical Support

CourseLink Technical Support
University of Guelph
Telephone: 519-824-4120 ex. 56939
Toll-Free (Can/U.S.): 1-866-275-1478
Email: courselpink@uoguelph.ca
Walk-in:
211 Day Hall

Hours:
Mon. - Fri.  8:30am - 4:30pm
Sat.    10:00am - 4:00pm
Sun.    12:00pm - 6:00pm

Distance Education

Open Learning and Educational Support
University of Guelph
Telephone: 519-824-4120 ex. 55000
Fax: 519-824-1112
Room 160 Johnston Hall
Email: info@OpenEd.uoguelph.ca

Assessment

Your grade for the course will be derived from an assessment of your performance in four assignments (one group and three individual); there are no examinations. The following chart identifies the assignments and their contribution to the final grade.

<table>
<thead>
<tr>
<th>Assignment #</th>
<th>Title</th>
<th>Date Due*</th>
<th>Grade (% of course)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Food safety policy (Group)</td>
<td>Group postings due Week 4; Policy Meeting, follow-up postings and final report Week 5</td>
<td>15%</td>
</tr>
<tr>
<td>2</td>
<td>Food Safety Risk Characterization (Individual)</td>
<td>Week 8</td>
<td>35%</td>
</tr>
<tr>
<td>3</td>
<td>Capstone project (Individual)</td>
<td>Topics selected Week 3 Paper due Week 11</td>
<td>35%</td>
</tr>
<tr>
<td>4</td>
<td>Participation in discussion (Individual)</td>
<td>Week 12</td>
<td>Student summary (5%) monitored discussion (10%)</td>
</tr>
</tbody>
</table>
*Please see the Schedule for specific due dates*

Please note that a week starts on Monday and ends on Sunday. With the exception of the Participation in discussion (due Thursday midnight (ET) of Week 12) all assignments are due on Sunday midnight (ET) of the week in which they are due.