University of Manitoba
Faculty of Agricultural and Food Sciences
Department of Food Science

Food 1000
Food safety today and tomorrow
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# COURSE DETAILS

<table>
<thead>
<tr>
<th>Course Title &amp; Number:</th>
<th>Food 1000 Food Safety Today and Tomorrow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Credit Hours:</td>
<td>3</td>
</tr>
<tr>
<td>Class Times &amp; Days of Week:</td>
<td>Tuesday and Thursday 11.30 to 12.45</td>
</tr>
<tr>
<td>Location for classes/labs/tutorials:</td>
<td>Agriculture Building Room #172</td>
</tr>
<tr>
<td>Pre-Requisites:</td>
<td>None</td>
</tr>
</tbody>
</table>

## Instructor Contact Information

<table>
<thead>
<tr>
<th>Instructor(s) Name:</th>
<th>Snehil Dua, Ph.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preferred Form of Address:</td>
<td>Anything polite</td>
</tr>
<tr>
<td>Office Location:</td>
<td>408-Human Ecology Building</td>
</tr>
<tr>
<td>Office Hours or Availability:</td>
<td>Office hours 13:00 to 14:30 Thursday, or contact by email <a href="mailto:Snehil.Dua@UManitoba.ca">Snehil.Dua@UManitoba.ca</a></td>
</tr>
<tr>
<td>Office Phone No.</td>
<td>204-4746505 (Please do not leave a message at this number. Write an email instead.)</td>
</tr>
<tr>
<td>Email:</td>
<td>See above: I will attempt to answer emails and phone calls within 48 hours</td>
</tr>
<tr>
<td>Contact:</td>
<td>If you want to contact me an email with the subject heading <strong>Food 1000 and your name</strong> is best, but you can see me after a class session or during my normal office hours (see above)</td>
</tr>
</tbody>
</table>
Course Description

A contemporary examination of food safety, where, how, why and when problems may arise and what is and can be done to achieve consistently high quality, safe food. Controversial issues (residues, organic, biotechnology, irradiation, etc.) will be discussed in a balanced manner.

General Course Information

This course should be of interest to anyone who eats. Although a high school knowledge of biology and chemistry would be useful, every attempt is made to make the course accessible to those without this background.

Course Goals

The broad goal of this course is to enable students develop an understanding of the principles of food safety assessment.

Intended Learning Outcomes

The course introduces students to the potential hazards of the food supply system and how these hazards may be mitigated. The course will enable the student to:

1. Recognise the difference between a hazard and a risk.
2. Distinguish between various types of risks and interpret their meaning
3. Understand the principles of risk assessment.
4. Recognize various stake holders in food safety and their responsibilities in food safety throughout the food chain.
5. Recognise personal responsibility in food safety.

Using Copyrighted Material

Please respect copyright. We will use copyrighted content in this course. I have ensured that the content I use is appropriately acknowledged and is copied in accordance with copyright laws and University guidelines. Copyrighted works, including those created by me, are made available for private study and research and must not be distributed in any format without permission. Do not upload copyrighted works to a learning management system (such as UM Learn), or any website, unless an exception to the Copyright Act applies or written permission has been confirmed. For more information, see the University’s Copyright Office website at http://umanitoba.ca/copyright/ or contact um_copyright@umanitoba.ca.

Recording Class Lectures

Michael Trevan and the University of Manitoba hold copyright over the course materials, presentations and lectures which form part of this course. No audio or video recording of lectures or presentations is allowed in any format, openly or surreptitiously, in whole or in part without permission from Michael Trevan, unless you have approval from Student Accessibility...
Services. Course materials (both paper and digital) are for the participant’s private study and research only and must not be uploaded to the internet or shared in any way either physically or electronically.

**Textbook, Readings, Materials**
There are no required reading materials. The following are recommended:
Canadian Food Inspection Agency.
http://www.inspection.gc.ca/eng/1297964599443/1297965645317

**Course Technology**
It is the general University of Manitoba policy that all technology resources are to be used in a responsible, efficient, ethical and legal manner. You can use all technology in a classroom setting only for educational purposes approved by instructor and/or the University of Manitoba Disability Services. You should not participate in personal direct electronic messaging / posting activities (e-mail, texting, video or voice chat, wikis, blogs, social networking (e.g. Facebook) online and offline “gaming” during scheduled class time. If you are on call (emergency) please switch your phone on vibrate mode and leave the classroom before using it. (adapted from ©S Kondrashov. Used with permission)

Material for this course is uploaded to UM Learn. Please see http://intranet.umanitoba.ca/academic_support/Centre_for_the_Advancement_of_Teaching_&_Learning/resources/wikis_blogs.html. for support in using this system

**Class Communication**
The University requires all students to activate an official University email account. For full details of the Electronic Communication with Students please visit: http://umanitoba.ca/admin/governance/media/Electronic_Communication_with_Students_Policy_-_2014_06_05.pdf

Please note that all communication between myself and you as a student must comply with the electronic communication with student policy (http://umanitoba.ca/admin/governance/governing_documents/community/electronic_communication_with_students_policy.html). You are required to obtain and use your U of M email account for all communication between yourself and the university.
Expectations: I Expect You To

Attend,
Participate,
Demonstrate willingness to learn,
Be courteous,
Show academic integrity and honesty.
Work effectively as a team to design and execute class activities.
Not to leave the class before it ends unless there is an emergence to which you must attend.
Leaving a class before the end is disrespectful to your instructor and disruptive towards your fellow students.
Not use your cell phone - Please be respectful in class and turn your cell phone off or onto vibration mode for the duration of the class.
Use your laptop computers to aid your learning- Laptops are a perfect way to take notes in class and share information with peers; be respectful to the instructor and other students while using laptops by staying on task in class.
Answer questions that I will ask of the class. I do not expect you always (or ever!) to get the correct answer, but I do expect you to try and to participate.

Students Accessibility Services

Student Accessibility Services
If you are a student with a disability, please contact SAS for academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury-related, visual) are invited to contact SAS to arrange a confidential consultation.
Student Accessibility Services http://umanitoba.ca/student/saa/accessibility/
520 University Centre
204 474 7423
Student_accessibility@umanitoba.ca

Expectations: You Can Expect Me

To treat you fairly and with respect.
I will remain in the classroom for 10 minutes after class to answer any immediate questions.
I recognise that the academic background of this class is very varied. If I say something or use a term that you do not understand please ask for an explanation at the time in class, because it is most unlikely that you are the only one in the room who did not understand.
There is a lot of content, and for many if not most of you the content will be new and challenging. My role is to help you make sense of it and gain new understandings. My aim,
therefore, is to provide support so that all students who engage with this course and its objectives will pass.

This course contains some elements that are controversial (e.g. the utility of GMO based foods). If I say something that you think is strange or not true, then I will respond as best I can to your respectful challenge or request for clarification.

Class Schedule

This schedule is subject to change at the discretion of the instructor and/or based on the learning needs of the students but such changes are subject to Section 2.8 of the ROASS Procedure).

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>07</td>
<td>Before we begin</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Introduction and Overview</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Perceived risks</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Food Safety Trends and Issues 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Junk food, Obesity, diabetes, Organic, GMO, Mad cow, unpasteurized products, antibiotic resistance)</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>Food Safety Trends and Issues 2</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>Food Safety Trends and Issues 3</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Documentary report date due</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Media stories and their impact on perceptions of nutrition and the food industry</td>
</tr>
<tr>
<td>October</td>
<td>03</td>
<td>Hazards vs. risks</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Quantifying the impact of a risk.</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>The roles of microorganisms in the food industry</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Midterm exam 1</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Food Spoilage</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>Foodborne Illness 1</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>Foodborne Illness 2</td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>Food Preservation</td>
</tr>
<tr>
<td>November</td>
<td>02</td>
<td>Chemicals in Foods</td>
</tr>
<tr>
<td></td>
<td>07</td>
<td>Food Additives</td>
</tr>
<tr>
<td></td>
<td>09</td>
<td>Contaminants</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Carcigenic vs. non-carcinogenic</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Agrochemicals</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Innovation and Producing Safe New Foods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Death at the Wedding due date</td>
</tr>
</tbody>
</table>
Course Evaluation Methods

There are two mid-term tests that together make up 40% of the marks. There are two written pieces required, a documentary report and a report on the possible cause of the death of a bride at her (19th century) wedding. In addition, there are three in-class group exercises.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Documentary report</td>
<td>10%</td>
</tr>
<tr>
<td>Class group activities: discussion and report</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm exams (two at 20% each)</td>
<td>40%</td>
</tr>
<tr>
<td>Death at the Wedding report</td>
<td>10%</td>
</tr>
<tr>
<td>Final exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

Grading

Standardized grades used are those followed by the Food Science Department:

<table>
<thead>
<tr>
<th>Final grade</th>
<th>Letter Grade</th>
<th>Grade Point Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 - 100%</td>
<td>A+</td>
<td>4.5</td>
<td>Exceptional</td>
</tr>
<tr>
<td>80 - 89%</td>
<td>A</td>
<td>4.0</td>
<td>Excellent</td>
</tr>
<tr>
<td>75 - 79%</td>
<td>B+</td>
<td>3.5</td>
<td>Very Good</td>
</tr>
<tr>
<td>67 - 74%</td>
<td>B</td>
<td>3.0</td>
<td>Good</td>
</tr>
<tr>
<td>61 - 66%</td>
<td>C+</td>
<td>2.5</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>56 - 60%</td>
<td>C</td>
<td>2.0</td>
<td>Adequate</td>
</tr>
<tr>
<td>50 - 55%</td>
<td>D</td>
<td>1.0</td>
<td>Marginal</td>
</tr>
<tr>
<td>Under 50%</td>
<td>F</td>
<td>0.0</td>
<td>Failure</td>
</tr>
<tr>
<td></td>
<td>P</td>
<td>Null</td>
<td>Pass</td>
</tr>
</tbody>
</table>
Referencing Style

This is a class of students from across the university, studying different disciplines. I do not therefore expect a particular referencing style, but I do expect the style you use to be consistent.

Assignment Descriptions

**Documentary report: 10%**
Describe the industrial production of your favorite food
Go to the link: [http://www.foodnetwork.ca/shows/food-factory-usa/](http://www.foodnetwork.ca/shows/food-factory-usa/)
Choose any industrial food production listed in the program.
Watch it and write a report describing the whole process of the chosen food (from raw material to finished product; 750-1000 words in length).
**Date due: 26/09/2017**

**Death at the Wedding: 10%**
This will be an analysis of the lecture on the topic using your knowledge of food safety to determine the cause of death of the bride at a wedding in the UK in the late 19th century. The expected length will be approximately 500 to 600 words.
**Due date: 16/11/2017**

**Class activities: 15%**
Teamwork, written assignments (short essay 250 words) or class discussions/short presentations (5-8 min) related to any assigned topic.
**Date due: as advised**

**Midterm exams: 40%**
Short answer, short essay, multiple choices, fill the blank, true/false and/or matching exams.
Midterm I: from Introduction to Quantifying the impact of risk (20%; **17/10/2017**).
Midterm II: from The Roles of Microorganisms to innovation and producing safe new foods. (20%; **21/11/2017**).

Final exam: 25%
Short answer, short essay, multiple choices, fill the blank, true/false and/or matching exams.
To be scheduled by the Registrar’s office. TBD.

Assignment Grading Times

Your assignments will be marked and returned to you within an appropriate time. At this time there are 170 students registered on this course and we aim to return your marked assignments within one week of submission, but this may not always be possible.
Assignment Extension and Late Submission Policy

Assignment extensions will only be granted in cases of genuine need. You will need to talk to me in person as soon as possible if you require an extension. It is impossible to specify all occasions that might warrant an extension, but the death or funeral of a close relative would be a good reason, the death of a friend’s pet dog would not.

Late submissions will be marked, but do not expect a prompt return of the work. This is a large class with only one instructor and two grader assistants, and work that is not submitted on time disrupts the timely assessment and return of assignments. Late submission will incur a deduction of 5% for each weekday that the assignment is submitted after the deadline, unless an assignment extension has been permitted by me in advance of the deadline.

Other useful stuff that other instructors will have given you as well, but at least with electronic documents we don’t have to cut down a rain forest!

Writing and Learning Support

The Academic Learning Centre (ALC) offers services that may be helpful to you throughout your academic program. Through the ALC, you can meet with a learning specialist to discuss concerns such as time management, learning strategies, and test-taking strategies. The ALC also offers peer supported study groups called Supplemental Instruction (SI) for certain courses that students have typically found difficult. In these study groups, students have opportunities to ask questions, compare notes, discuss content, solve practice problems, and develop new study strategies in a group-learning format.
You can also meet one-to-one with a writing tutor who can give you feedback at any stage of the writing process, whether you are just beginning to work on a written assignment or already have a draft. If you are interested in meeting with a writing tutor, reserve your appointment two to three days in advance of the time you would like to meet. Also, plan to meet with a writing tutor a few days before your paper is due so that you have time to work with the tutor’s feedback.

These Academic Learning Centre services are free for U of M students. For more information, please visit the Academic Learning Centre website at:

http://umanitoba.ca/student/academiclearning/

You can also contact the Academic Learning Centre by calling 204-480-1481 or by visiting 201 Tier Building.

University of Manitoba Libraries (UML)

As the primary contact for all research needs, your liaison librarian can play a vital role when completing academic papers and assignments. Liaisons can answer questions about managing citations, or locating appropriate resources, and will address any other concerns you may have, regarding the research process. Liaisons can be contacted by email or phone, and are also available to meet with you in-person. A complete list of liaison librarians can be found by subject: http://bit.ly/WcEbA1 or name: http://bit.ly/1tJ0bB4. In addition, general library assistance is provided in person at 19 University Libraries, located on both the Fort Garry and Bannatyne campuses, as well as in many Winnipeg hospitals.
For a listing of all libraries, please consult the following: http://bit.ly/1sXe6RA.

When working remotely, students can also receive help online, via the Ask-a-Librarian chat found on the Libraries’ homepage: www.umanitoba.ca/libraries.

Section (b) sample: re: A statement regarding mental health that includes referral information.

For 24/7 mental health support, contact the Mobile Crisis Service at 204-940-1781.

Student Counselling Centre
Contact SCC if you are concerned about any aspect of your mental health, including anxiety, stress, or depression, or for help with relationships or other life concerns. SCC offers crisis services as well as individual, couple, and group counselling. Student Counselling Centre:
http://umanitoba.ca/student/counselling/index.html
474 University Centre or S 207 Medical Services
(204) 474-8592

Student Support Case Management
Contact the Student Support Case Management team if you are concerned about yourself or another student and don’t know where to turn. SSCM helps connect students with on and off campus resources, provides safety planning, and offers
other supports, including consultation, educational workshops, and referral to the STATIS threat assessment team.


520 University Centre
(204) 474-7423

University Health Service

Contact UHS for any medical concerns, including mental health problems. UHS offers a full range of medical services to students, including psychiatric consultation.

University Health Service [http://umanitoba.ca/student/health/](http://umanitoba.ca/student/health/)

104 University Centre, Fort Garry Campus
(204) 474-8411 (Business hours or after hours/urgent calls)

Health and Wellness

Contact our Health and Wellness Educator if you are interested in information on a broad range of health topics, including physical and mental health concerns, alcohol and substance use harms, and sexual assault.

Health and Wellness Educator [http://umanitoba.ca/student/health-wellness/welcome.html](http://umanitoba.ca/student/health-wellness/welcome.html)

Katie.Kutryk@umanitoba.ca

469 University Centre
Live Well @ UofM

For comprehensive information about the full range of health and wellness resources available on campus, visit the Live Well @ UofM site:

http://umanitoba.ca/student/livewell/index.html

Section (c) sample: re: A notice with respect to copyright:

All students are required to respect copyright as per Canada’s Copyright Act.

Staff and students play a key role in the University’s copyright compliance as we balance user rights for educational purposes with the rights of content creators from around the world. The Copyright Office provides copyright resources and support for all members of the University of Manitoba community.

Visit http://umanitoba.ca/copyright for more information.

Section (d) sample: re: A statement directing the student to University and Unit policies, procedures, and supplemental information available on-line:

Your rights and responsibilities
As a student of the University of Manitoba you have rights and responsibilities. It is important for you to know what you can expect from the University as a student and to understand what the University expects from you. Become familiar with the policies and procedures of the University and the regulations that are specific to your faculty, college or school.

The Academic Calendar
http://umanitoba.ca/student/records/academiccalendar.html is one important source of information. View the sections University Policies and Procedures and General Academic Regulations.

While all of the information contained in these two sections is important, the following information is highlighted.

- If you have questions about your grades, talk to your instructor. There is a process for term work and final grade appeals. Note that you have the right to access your final examination scripts. See the Registrar’s Office website for more information including appeal deadline dates and the appeal form http://umanitoba.ca/Registrar/

- You are expected to view the General Academic Regulation section within the Academic Calendar and specifically read the Academic Integrity regulation. Consult the course syllabus or ask your instructor for additional information about demonstrating academic integrity in your academic work. Visit the Academic Integrity Site for tools and support http://umanitoba.ca/academicintegrity/ View the Student Academic Misconduct procedure for more information.
• The University is committed to a respectful work and learning environment. You have the right to be treated with respect and you are expected conduct yourself in an appropriate respectful manner. Policies governing behavior include the:

Respectful Work and Learning Environment

http://umanitoba.ca/admin/governance/governing_documents/community/230.html

Student Discipline

http://umanitoba.ca/admin/governance/governing_documents/students/student_discipline.html and,

Violent or Threatening Behaviour

http://umanitoba.ca/admin/governance/governing_documents/community/669.html

• If you experience Sexual Assault or know a member of the University community who has, it is important to know there is a policy that provides information about the supports available to those who disclose and outlines a process for reporting. The Sexual Assault policy may be found at http://umanitoba.ca/admin/governance/governing_documents/community/230.html More information and resources can be found by reviewing the Sexual Assault site http://umanitoba.ca/student/sexual-assault/

• For information about rights and responsibilities regarding Intellectual Property view the policy http://umanitoba.ca/admin/governance/media/Intellectual_Property_Policy_-
For information on regulations that are specific to your academic program, read the section in the Academic Calendar and on the respective faculty/college/school web site [http://umanitoba.ca/faculties/](http://umanitoba.ca/faculties/)

Contact an Academic Advisor within our faculty/college or school for questions about your academic program and regulations [http://umanitoba.ca/academic-advisors/](http://umanitoba.ca/academic-advisors/)

Student Advocacy

Contact Student Advocacy if you want to know more about your rights and responsibilities as a student, have questions about policies and procedures, and/or want support in dealing with academic or discipline concerns.


520 University Centre

204 474 7423

student_advocacy@umanitoba.ca