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Syllabus

Topics in Agronomy: **Scientific advances in organic crop production**

PLNT 7620

Winter term, 2022

Martin Entz, Department of Plant Science

Faculty of Agricultural & Food Sciences



UNIVERSITY
OF MANITOBA

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COURSE DETAILS

Course Title & Number:	Topics in Agronomy PLNT 7620: Scientific advances in organic crop production
Number of Credit Hours:	3
Class Times & Days of Week:	TBD (2.5 hours per week)
Location for classes/labs/tutorials:	TBD
Pre-Requisites:	Instructor approval

Instructor Contact Information

Instructor(s) Name & Preferred Form of Address:	Professor Entz
Office Location:	Plant Science Room 309
Office Hours or Availability:	Make an appointment face-to-face or email
Office Phone No.	204 474-6077
Email:	m.entz@umanitoba.ca
Contact:	The best way to contact me is by email. Or feel free to drop into my office – I work with my office door open.

Course Description

U of M Course Calendar Description

An in-depth study of selected topics of current interest in the field of Agronomy.

General Course Description

Through readings, discussion and other interactions, the course provides students with an in-depth examination of the scientific advances in organic agriculture in Canada and around the world.

Course Goals

Course goals are to gain a deeper appreciation for the scientific exploration which has taken place in “organic agricultural systems”, learn more about leading researchers in the field, gain experience designing a research project, and have the opportunity to discuss topics with peers.

Course Learning Objectives

- Gain a deeper appreciation for the scientific exploration which has taken place in “organic agricultural systems”. There are uniquely “organic” ways of conducting research and students will learn them. An example is how low levels of weed biomass are present in almost every organic field study, making interpretation of biomass production and resource-use more complex than where herbicides are used to eliminate co-plants.
- Learn more about leading researchers in the field of organic agriculture science. By interviewing researchers and compiling a summary of their scientific studies, students will learn first hand how individual researchers approach and design their projects and how they chart their research careers.
- Gain experience sharing a scientific topic in organic agriculture with a group of advanced undergraduates by providing a short lecture and leading a discussion with the students on your topic.
- Gain experience designing a research program and preparing a short research proposal.
- Get exposure to a variety of scientific papers and learn about new analytical and statistical tools.
- Have the opportunity to discuss topics with peers and to share opinions and perspectives.

Textbook, Readings, and Course Materials

Students will be assigned weekly readings and the professor will post all papers on UM Learn for ready student access.

Required textbook – There is no textbook for this course.

Supplementary readings – will be posted on UM Learn.

Recommended or required materials (e.g. lab equipment, art supplies, computers, etc.) – none required.

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.

Course Technology

The course will be offered in person, or a combination of in-person and WebEx. Students are free to use tablets, cellphones, laptops, etc. in the classroom provided these are used in a responsible, efficient, ethical and legal manner.

Expectations: I Expect You To

All students are expected to complete weekly reading before class. All students are expected to participate in class discussions. All students are expected to attend all classes. We will adhere to the UM's respectful work and learning policy See [Respectful Work and Learning Environment Policy](#).

The policies and services students are listed below ([Section 2.5 ROASS](#)).

Class Communication:

You are required to obtain and use your University of Manitoba email account for all communication between yourself and the university. All communication must comply with the Electronic Communication with Student Policy:

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

Academic Integrity:

Each student in this course is expected to abide by the University of Manitoba [Academic Integrity principles](#). Always remember to reference the work of others that you have used. Also be advised that you are required to complete your assignments independently unless otherwise specified. If you are encouraged to work in a team, ensure that your project complies with the academic integrity regulations. You must do your own work during exams. Inappropriate collaborative behavior and violation of other Academic Integrity principles, will lead to the serious [disciplinary action](#). Visit the [Academic Calendar](#), [Student Advocacy](#), and [Academic Integrity](#) web pages for more information and support.

Refer to specific course requirements for academic integrity for individual and group work such as:

- I. Group projects are subject to the rules of academic dishonesty;
- II. Group members must ensure that a group project adheres to the principles of academic integrity;
- III. Students must complete weekly assignments on their own – no collaboration on assignments is allowed; and
- IV. All other work should be completed independently unless otherwise specified.

Recording Class Lectures:

The discussion periods will not be recorded. In case of students missing class due to medical (e.g. Covid 19) reasons, students will be able to join the class through WebEx but these sessions will not be recorded.

Student Accessibility Services:

The University of Manitoba is committed to providing an accessible academic community. [Students Accessibility Services \(SAS\)](#) offers 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
 520 University Centre
 Phone: (204) 474-7423
 Email: Student_accessibility@umanitoba.ca

Expectations: You Can Expect Me To

I will be in class for 10 minutes prior to and after the class time to discuss any questions or comments you may have. I am also available to discuss class material and answer questions outside of class time. Please email to make an appointment.

I will return assignments within one week of receiving them. Each assignment will receive feedback in terms of content, level of insight and analysis, and grammar and overall composition. The varied set of assignments provides students with a variety of learning strategies.

CLASS SCHEDULE AND COURSE EVALUATION

As a graduate course, the meeting time for the class will not be determined until schedules of all students are known. The class will meet once per week. Each in-class meeting will be 2.5 hours in length, with a 15 minute break. The first half will involve student-led presentations and or discussion. The second half will be Dr. Entz (or guest) provide background material on next week’s topic.

Consideration will be given to student participation in other graduate studies commitments such as conferences.

Date	Class Content & Teaching Strategies	Required Readings or any Pre-class Preparation	Evaluation		
			Type of Assessment	Due Date	Value of Final Grade (%)
Weeks 1 and 2	Yield stability through diversity management	Reading list at end of syllabus	Weekly written summary and in-class discussion	At start of class	4
Weeks 3 and 4	Nutrient flows and management	Reading list at end of syllabus	Weekly written summary and in-class discussion	At start of class	4
Weeks 5 and 6	Genetic crop improvement	Reading list at end of syllabus	Weekly written summary and in-class discussion Weekly written summary and in-class discussion	At start of class	4

Topics in Agronomy PLNT 7620 Scientific Advances in Organic Crop Production

Week 7	Pest management	Reading list at end of syllabus	Weekly written summary and in-class discussion	At start of class	4
Week 8	Healthful crop management	Reading list at end of syllabus	Weekly written summary and in-class discussion	At start of class	4
Week 9	Ecosystems services	Reading list at end of syllabus	Weekly written summary and in-class discussion	At start of class	4
	Researcher profile		Written report	Late Feb	24
	Lecture on a topic in organic agricultural science		Deliver lecture	Mid March	15
	Design an experiment		Written report	Final day of classes	30
	In class participation				7
Total					100

Grading

Indicate your grading scale. A sample is given below that you can adjust to your course expectations.

Letter Grade	Percentage out of 100	Grade Point Range	Final Grade Point
A+	95-100	4.25-4.5	4.5
A	86-94	3.75-4.24	4.0
B+	80-85	3.25-3.74	3.5
B	72-79	2.75-3.24	3.0
C+	65-71	2.25-2.74	2.5
C	60-64	2.0-2.24	2.0
D	50-59	Less than 2.0	1.0
F	Less than 50		0

Voluntary Withdrawal

Students should refer to the [Registrar's Office](#) web page for more information on voluntary withdrawal date. This date is the last day to drop the class and receive 100% refund. Students who do not drop the course by the deadline will be assigned a final grade. Withdrawal of courses will be recorded on official transcript. The professor is willing to discuss student's progress and strategies for improvement prior the withdrawal date.

ASSIGNMENT DESCRIPTIONS

A detailed description of the assignments will be presented at the first class meeting. The final details of the assignments will depend on the students enrolled so that the course can be best tailored to fit the needs of the students. In short, the assignments are as follows:

- 1) Weekly readings followed by reflections and discussion. Students must summarize one paper within the subject area (500 words) (24%). Written reflections are due at the beginning of the respective class.
- 2) Each student will conduct a profile featuring one international research scientist in the area of organic production (24%). Due late February.
- 3) Each student will prepare a lecture on a topic in organic agricultural science and present it to advanced level undergraduates (PLNT 3560) (15%). Conducted in mid-March.
- 4) Each student will design an experiment within one of the 5 course objective areas (or another with permission from instructor). The work will be included in a written research proposal (30%). Due at the end of the course.

Referencing Style

Assignments should use the APA reference style as outlined in the text: American Psychological Association. (2009). Publication manual of the American Psychological Association (6th ed.). Washington, DC: Author.

Assignment Feedback

I will return assignments within one week of receiving them. Each assignment will receive feedback in terms of content, level of insight and analysis, and grammar and overall composition. There will be both formative (i.e., comments) and summative (i.e., grade) feedback. The feedback will be delivered via paper and electronically.

Assignment Extension and Late Submission Policy

The weekly written assignment is due at the beginning of each class. No exceptions. More detailed deadlines for all other assignments will be given the first week of class – once it is clear how many students are registered. All assignments must be submitted to pass the course.

UNIVERSITY SUPPORT OFFICES & POLICIES

Information on university support offices and policies are provided in [Schedule "A"](#) below.

Schedule "A"

Section (a) sample re: A list of academic supports available to Students, such as the Academic Learning Centre, Libraries, and other supports as may be appropriate:

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 205 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 S207 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.

Student Support Intake Assistant <http://umanitoba.ca/student/case-manager/index.html>

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/>

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 [peer support from Healthy U](#) or 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 <https://umanitoba.ca/student/health-wellness/welcome-about.html>

britt.harvey@umanitoba.ca

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) <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 to 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_-_2013_10_01.pdf

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/>

Contact an **Academic Advisor** within our faculty/college or school for questions about your academic program and regulations <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.

<http://umanitoba.ca/student/advocacy/>

520 University Centre

204 474 7423

student_advocacy@umanitoba.ca