# Course Outline Form: Fall 2017

## General Information

**Course Code: OAGR\*4050**

**Course Title: Design of Organic Production Systems**

**Course Description:**

Students will apply organic agriculture principles to the design and concept of agricultural operations, taking into account the interactions of soils, plants and animals with environmental and managerial factors.

**Credit Weight**: 1.0

**Academic Department (or campus):** School of Environmental Sciences

**Campus:** Guelph

**Semester Offering:** Fall 2017

**Class Schedule and Location:**

Lectures: Monday - 2:30 to 4:20 PM

Location: McKinnon Room 306

Lab: Friday - 10:30 AM to 12:20 PM

Location: Alexander Hall Room 030

## Instructor Information

Instructor Name: Ruth Knight

Instructor Email: rknigh01@uoguelph.ca

Office location and office hours: by appointment, before or after class time.

## GTA Information

GTA Name: NA

GTA Email: NA

GTA office location and office hours: NA

## Course Content

### Specific Learning Outcomes:

On completion of the course, students will be able to:

1. be able to identify and apply principles of organic, regenerative and holistic management systems
2. design a sustainable farm production system that is tailored for a future constrained by increasing land and energy costs, increasing climatic variability, and that complies with Canadian organic regulations;
3. capture and quantify the ecological and economic synergies obtained by combining enterprises within the farm enterprises, and show how a given resource investment increases income from more than one enterprise;
4. appreciate farm enterprises as multi-functional service providers - including producers of food, fibre, fuel and environmental services;
5. identify and use appropriate sources of information to construct whole farm nutrient and carbon budgets; and
6. prepare a business plan that encompasses both financial and ecological balance sheets (e.g. C-credits, environmental stewardship), suitable for soliciting funding from appropriate sources and guiding fiscal management decisions.

Learning Objectives:

1. Critical and Creative Thinking:

1.1) Reinforcement of Inquiry and Analysis through critical review of scientific journal articles.

1.2) Reinforcement of Integrative and Applied Learning through a research topic which evaluates a potential management solution to a problem in organic production practices.

2. Literacy:

2.1 Reinforcement of Collaborative Literacy through the selection of the group research and presentation topic.

2.2 Reinforcement of Depth and Breadth of Understanding individual research for oral and written projects.

3. Global Understanding:

3.1) Introduction of Global Knowledge through research and review of relevant scientific literature.

3.2) Introduction of Intercultural Knowledge and Competence through review of local farmer experiences and federal and provincial agricultural information.

4. Communicating:

4.1) Reinforcement of Oral Communication through oral presentations associated with individual and group topics.

4.2) Reinforcement of Reading Comprehension through individual research topic and written papers.

5. Professional and Ethical Behaviour:

5.1) Reinforcement of Teamwork through group research topic and selection and final oral presentation and written paper.

5.2) Reinforcement of Collective Learning through sharing of notes and discussions.

### Lecture Content:

The first 6 weeks of the term will involve lectures, readings, and student seminars to provide students with the tools needed for farm system design. During the latter half of the course, students will work on the progressive construction of the farm design and develop a business plan.

During the first six weeks of the semester, students will select a topic from the course material list (see example below) and prepare a 12 minute seminar on the chosen topic, and reference information obtained from scientific journals. The seminar will consist of approximately 10 power point slides and encourage class questions and discussion.

1. Assessing Resource Base

 Evaluation of human and natural landscape

2. Soil Fertility Management and Monitoring

 Soil Testing

 Plant Testing

 Water Testing

 Composts and animal manures

 Soil amendments

3. Organic Management Practices

 Tillage

 Cover Crops

 Crop rotations

 Pest and disease management

 Weed management

4. Livestock Management

 Integrated crop/livestock systems

 Organic herd health

 Livestock husbandry and handling

5. Record Keeping for Compliance

 The why, what and how of record keeping for Organic Certification

6. Market Options

 market options for organic enterprises

7. Farm business plan

 The why, what and how to constructing and using a farm business plan

### Labs:

Students will work in groups to design a resilient farming system that is ecologically, economically and socially sustainable, and is compliant with Canadian organic regulations

### Seminars:

Students will present individually two seminars (12 min) during the first 6 weeks of the semester.

### Course Assignments and Tests:

| **Assignment or Test** | **Due Date** | **Contribution to Final Mark (%)** | **Learning Outcomes Assessed** |
| --- | --- | --- | --- |
| Individual Seminars (2) | First 6 weeks | 30 | 2.2,4.1 |
| Collective Learning | As assigned | 5 | 5.1, 5.2 |
| Main project A. Background context, resource evaluation, preliminary (group oral) | Week 7 | 10 | 1.2,2.1,3.1,3.2,4.1,5.1 |
| Main project B. Soil management and nutrient recommendations for organic plant production (group oral) | Week 10 | 10 | 1.1,2.2,3.1,3.2,4.1,5.1 |
| Main project C. Final design and business plan (group oral) | Week 12 | 20 | 4.1,5.1 |
| Main project. Final farm design and business plan (written) | Last day of classes | 25 | 1.1,1.2,2.1,2.2,3.2,4.2,5.1 |

Additional Notes (if required):

### Final examination date and time: Not applicable

### Final exam weighting: Not applicable

## Course Resources

### Required Texts: None

### Recommended Texts:

It is recommended that OAGR 4040 students become familiar with

Organic Inputs Canada

http://www.organicinputs.ca/en/

Organic Science Cluster

https://www.dal.ca/faculty/agriculture/oacc/en-home/organic-science-cluster/OSCII.html

Government of Canada - Organic production systems - General Principles and Management Standards

http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/programme-program/normes-standards/internet/bio-org/pgng-gpms-eng.html

Government of Canada - Organic production systems - Permitted Substances List

http://www.tpsgc-pwgsc.gc.ca/ongc-cgsb/programme-program/normes-standards/internet/bio-org/lsp-psl-eng.html

International Federation of Organic Movement - IFOAM Organics International

http://www.ifoam.bio/en/organic-landmarks/principles-organic-agriculture

Organic Federation of Canada

http://www.organicfederation.ca/

### Lab Manual: None

### Other Resources:

Student readings from scientific journal articles.

### Field Trips: All students will be expected to participate in 2 field trips to the farm sites (Drumbo and Seaforth) that will be used in the major project of developing a farm system. The timing will be scheduled for late Sept and early October to accommodate the students and farm hosts. Wear suitable footwear for field and barnyard conditions and be prepared for all outdoor weather. Please bring any food and water that you will require during this time. The field trips will add no cost to the students.

### Additional Costs:

No additional costs are planned for this course.

## Course Policies

### Grading Policies:

Assignments are due on the date indicated and should be submitted at the start of the class. The penalty for late submission is -10% of the earned mark for submission anytime within the first 24 hours; -5% for anytime within each subsequent 24 hours. Documentation for valid excuses for late or missing assignments needs to be provided.

### Course Policy on Group Work:

Students will work in self-chosen groups of 2 students, the task will be given to design a farming system and to identify the components of their specific topic areas. Students will individually prepare an oral presentation on their selected topic area.

Evaluation of this work will include a group component, evaluating the overall quality/integration of the presentations and summaries, as well as an individual component, reflecting the specific material assemble, interpreted and presented.

### Course Policy regarding use of electronic devices and recording of lectures:

Unless you are otherwise informed for specific classes, all electronic devices are not to be used for any purpose. Exceptions may be granted, upon request, to students requiring an electronic device for accessibility purposes. The exception is also given to the designated note recorder for the assigned lecture.

Electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

## University Policies

### Academic Consideration:

The University of Guelph is committed to supporting students in their learning experiences and responding to their individual needs and is aware that a variety of situations or events beyond the student's control may affect academic performance. Support is provided to accommodate academic needs in the face of personal difficulties or unforeseen events in the form of Academic Consideration.

Information on regulations and procedures for Academic Consideration, Appeals and Petitions, including categories, grounds, timelines and appeals can be found in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml).

### 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. 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.

Detailed information regarding the Academic Misconduct policy is available in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml).

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

For more information, contact SAS at 519-824-4120 ext. 56208 or email sas@uoguelph.ca or visit the [Student Accessibility Services website (http://www.uoguelph.ca/csd/)](http://www.uoguelph.ca/csd/).

### Course Evaluation Information:

End of semester course and instructor evaluations provide students the opportunity to have their comments and opinions used as an important component in the Faculty Tenure and Promotion process, and as valuable feedback to help instructors enhance the quality of their teaching effectiveness and course delivery.

While many course evaluations are conducted in class others are now conducted online. Please refer to the [Course and Instructor Evaluation Website](https://courseeval.uoguelph.ca/) **for more information.**

### Drop period:

The drop period for single semester courses starts at the beginning of the add period and extends to the Fortieth (40th) class day of the current semester (the last date to drop a single semester courses without academic penalty) which is listed in [Section III (Schedule of Dates) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/).

The drop period for two semester courses starts at the beginning of the add period in the first semester and extends to the last day of the add period in the second semester.

Information about Dropping Courses can be found in [Section VIII (Undergraduate Degree Regulations and Procedures) of the Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml).

## Additional Course Information