ACKNOWLEDGEMENT

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəy̓əm (Musqueam) people. The land it is situated on has always been a place of learning for the Musqueam people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

COURSE INFORMATION

Course Title	Course Code Number	Credit Value
Introduction to Agroecology	APBI 260	6

PREREQUISITES

There are no prerequisites for this course

CONTACTS

Course Instructor(s)	Contact Details	Office Location	Office Hours
Dr. Sean Smukler	Please use Canvas to contact the instructor or use Piazza to ask general questions.	123 MacMillan	Scheduled by appointment either in person or by Zoom (primarily 1-3 Thursdays): 15 minutes: https://calendly.com/sean-smukler/15min 30 minutes: https://calendly.com/sean-smukler/30min

OTHER INSTRUCTIONAL STAFF

This course has six teaching assistants that help lead discussions and mark assignments.

COURSE STRUCTURE

The course is divided into three modules designed to introduce the students to increasingly complex concepts of agroecology and spatial scales. Problem based learning (PBL) provides the students with opportunities to discuss and research case studies corresponding to each of these levels of complexity and scale. The lab is designed to enable the students to learn field techniques, observe first-hand the concepts that are discussed in class and to develop and understanding of the scientific method.

SCHEDULE OF TOPICS

Lecture 11:00 am – 12:00 pm Mondays and Wednesdays in FNH 40

Problem Based Learning Discussions 1:00 pm – 4:00 pm Mondays in MCML 360 the Learning Commons

Labs 1:00 pm – 4:00 pm Wednesdays at the UBC Farm

LEARNING OUTCOMES

General Course Learning Outcomes: This course offers a wide range of learning and evaluation opportunities but relies heavily on self-directed learning. This means you are largely in control of what you learn. Through the various learning component of the course, by the end of the semester, it is expected that you will have achieved the following learning outcomes:

Learning Outcomes	Lecture	Home work	Lab	Problem Based Learning	Group Projects
1. Defined, described and applied basic ecological principles as they apply to agroecosystems	✓	✓	✓	✓	✓
2. Identified and described the structures (biotic and abiotic) and ecological functions (energy flow, nutrient cycling) of select agroecosystems	✓	✓	✓	✓	✓
3. Discussed the impacts and interrelationships between agricultural systems and associated ecosystems e.g. impacts of how land is used	✓	✓	✓	✓	✓
4. Described basic principles of genetic resource management in agroecosystems	✓	✓	✓	✓	✓
5. Identified holistic relationships between the major ecological, social and economic factors affecting agroecosystem sustainability (especially for the agroecosystems studied in this course)	✓	✓	✓	✓	✓
6. Discussed and applied agroecological principles to selected agroecosystems to assess their sustainability and make suggestions for enhanced sustainability	✓	✓	✓	✓	✓
7. Demonstrated critical-thinking and problem-solving skills, including an ability to access, retrieve evaluate and utilize relevant information from a wide range of sources including primary and secondary scientific literature sources, and also from practical observations (experience) from farmers, Agrologists, elders, youth and yourself		✓	✓	✓	✓
8. Improved your ability: to work efficiently in teams; to develop/ask questions to address relevant problems; and to independently		✓	✓	✓	✓

research information that effectively addresses these problems.				
9. Effectively and professionally communicated information in both written and spoken English using a variety of methods (writing, speaking and/or non-verbal forms of communication)		✓	✓	✓	✓
10. Demonstrated an ability to reflect on and connect hands-on (real-life) experiences to more theoretical learning, to develop your sense of social responsibility and leadership skills			✓	✓	✓
11. Interacted respectfully with others in our community-of-learners, including colleagues, instructors, farmers and other guests and community members.			✓	✓	✓

LEARNING ACTIVITIES

Students are expected to participate actively in lectures, PBL discussion and labs. Students will benefit from familiarizing themselves with the reading assigned before participating in the lectures and are expected to read the "essential" assigned reading.   During lectures students will be given the opportunity to respond to questions in teams and extra credit provided to randomly selected students who provide correct answers.

Details of each assignment including due dates can be found on Canvas in the calendar and online syllabus. Each week students will be expected to investigate learning issues, prepare a learning issues report and complete a problem set. Problem sets are questions that will be answered online in Canvas based on information provided in the lecture and the reading. These problem sets can be worked on in groups but the specific questions (and answers) are individualized for each user and will be graded for each student. At the end of module one and two students are expected to prepare a presentation as a group and then individually give the presentation and submit a report.   Throughout the semester students will be collecting data agroecological data at the UBC farm in labs guided by teaching assistants. At the end of the semester students will analyze this data as a group and then write a final project report that synthesizes the results of two of the labs of their choice on their own. Detailed rubrics for all written materials will be included as part of the PBL case notes.

Expected Effort

This course is 6 credits (roughly the equivalent of two courses) and requires participation in all of the components including lecture, lab, and problem based learning (PBL) discussions. These components

are all closely integrated along with the readings, learning issues, presentations, reports and problem sets. It is expected that you will spend around two hours working on your own for every hour of contact time based on the following breakdown:

Task	Location	Hours per week
Lecture	In class	2
PBL	In class	3
Lab	In class	3
Problem set	At home	2
Learning Issues	At home	2
Reading	At home	2
Reports	At home	2
Total		16

Hours of Effort by Category

- Lecture
- PBL
- Lab
- Problem set
- Learning Issues
- Reading
- Reports
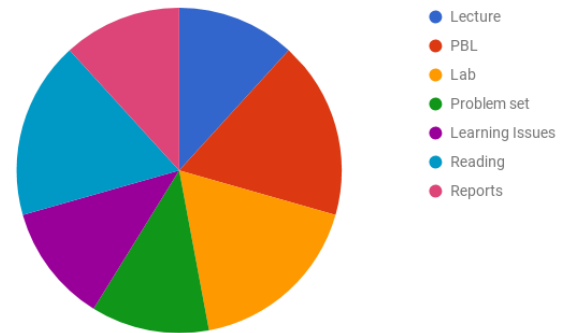
LEARNING MATERIALS

Gliessman, S.R. 2014. Agroecology – The Ecology of Sustainable Food Systems. Third Edition. Boca Raton: CRC Press LLC, Taylor and Francis Group. ISBN 9781439895610 – CAT# K14240. The textbook is available in the UBC Bookstore or an e-text book and can be purchased or rented from CRC press or Amazon.

Rite in the Rain waterproof field notebook.

ASSESSMENTS OF LEARNING

Student participation will be evaluated for group assignment based on discussion attendance, instructor observation and peer evaluation. Participation can modify group assignment grades by up to 10%.

Learning issues reports will be posted on Canvas' discussion page for the students' assigned group by 10 am the morning before the PBL discussion. All Case reports will be submitted to Turnitin. Late assignments will be marked down by 10% for every 24-hour period past the due date and time. There will be no exceptions. Each student is given two "get out of jail free (GOOJF) cards" for the semester. Each "card" will enable the student up to 24 hours of late submission. Students can use one or both of the GOOJF for any of the three reports.   Just upload a MS Word document to the "GOOJF Card" assignment in Canvas indicating which report you are using your "card" for BEFORE the assignment is due otherwise the card is not valid. Students are expected to submit 5 out of the 6 learning issues, 5 of the 10 labs, and 8 out of the 10 problem sets. The highest scores for each assignment will be used in the calculation of the final grade.

The point breakdown for assignments are as follows:

Assignments	Number of Assignments	Submitted Assignments	Points per Assignment	Total Points	Percent of total
Knowledge assessments	2	2	5	10	2
Learning Issues (LI)	6	5	10	50	11
Problem Sets	10	8	10	80	18
Case Presentations	2	2	30	60	13
Lab reports	10	5	10	50	11
Case Final Reports	2	2	50	100	22
Project Final Report	1	1	100	100	22
Total				**450**	**100**

EXTRA CREDIT

Extra credit can be earned in a variety of ways. Up to 45 points of extra credit can be earned throughout the semester.

- Correct answers provided in class quizzes 1 pt each up to 10 pts
- Current event article related to weekly course topic posted to discussion board and presented in class 1 pt each up to 10 pts
- Beneficial Management Practice (BMP) fact sheet 10 pts each up to 20 pts
- Participation in on farm activities or guest speakers 10 pts each up to 20 pts
- First person to contact the instructor with a correct identification of a mistake in the problem sets 1 pt each up to 10 pts.

HEALTH AND SAFETY

Our number one priority for this class is the health and safety of the students. For our in-person meetings in this class, it is important that all of us feel as comfortable as possible engaging in class activities while sharing an indoor space. Non-medical masks that cover our noses and mouths are a primary tool to make it harder for Covid-19 to find a new host. Please wear a non-medical mask during our class meetings, for your own protection, and the safety and comfort of everyone else in the class. If you have not yet had a chance to get vaccinated against Covid-19, vaccines are available to you, free and on campus. The higher the rate of vaccination in our community overall, the lower the chance of spreading this virus. You are an important part of this community. Please arrange to get vaccinated if you have not already done so.

If you feel sick please do not hesitate to stay home to care for yourself and protect others. The course has been designed in a variety of ways to ensure that students who choose to stay home are not penalized. The following are ways that will enable students to miss multiple days of the course without penalty:

- Lecture notes will be made available online prior to the lecture

- Lectures will be recorded on Zoom and posted
- Students who are sick may contact the instructor to participate in PBL discussions remotely
- Students can choose to opt out of a large percentage of the assignments
- Students can earn up to 10% of their grade through extra credit

UNIVERSITY POLICIES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.

Details of the policies and how to access support are available on **the UBC Senate website.**

Academic Dishonesty:

It is important to understand UBC's policies on academic conduct. Cheating, plagiarism, and other forms of academic misconduct are taken very seriously at UBC and in this course. Turnitin is utilized to assess plagiarism and anything over 20% similarity will be flagged and reported.   In all cases of suspected academic misconduct, the parties involved will be pursued to the fullest extent dictated by the guidelines of the University. For details on University policies and procedures, please see the section on Academic Misconduct in the Campus-wide Policies and Regulations located in the UBC Calendar (http://students.ubc.ca/calendar)

LEARNING ANALYTICS

Learning analytics includes the collection and analysis of data about learners to improve teaching and learning. This course will be using the following learning technologies: Canvas, Turnitin, and iPeer. Many of these tools capture data about your activity and provide information that can be used to improve the quality of teaching and learning. In this course, I plan to use analytics data to:

- View overall class progress
- Review statistics on course content being accessed to support improvements in the course
- Track participation in discussion forums
- Assess your participation in discussions

COPYRIGHT

All materials of this course (course handouts, lecture slides, recorded lectures, assessments, course readings, etc.) are the intellectual property of the Course Instructor or licensed to be used in this