

AGRO 1103: Crops, Environment and Society

Syllabus



Overview: Plants are incredibly important for providing food, fuel, and fiber to humans across the globe. Where and how these plants are produced is determined by soil, weather, natural biodiversity, and human culture. In turn, agricultural production of plants shapes the natural environment and society. This class will provide students with an overview of crop production including the history of agriculture, food chemistry, and plant growth and physiology as it relates to agriculture. Students will evaluate crop production practices in terms of their economic, social, and environmental outcomes, and highlight tradeoffs and synergies among these outcomes. In the lab, students will collect, analyze, and synthesize data to inform decision making in agriculture.

Student learning outcomes:

1. Learn the fundamentals of crop quality, yield, and production.
2. Gain exposure to common crops grown globally and locally for food, fuel, and fiber production.
3. Understand the roles of climate, weather, soil and pests on crop production.
4. Practice collecting and analyzing data from field experiments.
5. Synthesize data and information from experiments to draw conclusions about efficient crop production.
6. Explore the interconnections between human society and culture on crop production and environmental impacts.
7. Practice critical thinking and quantitative reasoning individually and within groups.

Instructors: Professor Jacob Jungers (pronounced Yungers), junge037@umn.edu; James Bowden (TA), bowde047@umn.edu

Official course meeting times:

Lectures - Tuesdays and Thursdays from 10:15 am to 11:30 am

Labs - Mondays (Section 2) from 1:55 pm to 3:50 pm; Tuesdays (Section 3) from 12:50 pm to 2:45 pm; and Tuesdays (Section 4) from 3:00 pm to 4:55 pm

Modality: This class will be taught using a hybrid modality. We will meet in-person for one of the lecture periods (on Tuesdays, see below for details) and in-person for the labs. The second lecture period (on Thursdays) will be reserved for you to watch pre-recorded lecture videos.

Course meeting times

- Tuesday sessions (10:15 - 11:30) will be weekly *in-person sessions* in 335 [Borlaug Hall](#). Attendance is required and recorded.
- Thursday sessions (10:15 - 11:30) will not require any in-person meetings. Pre-recorded lectures videos will be made available each week for you to watch and study asynchronously. **Lab quizzes will be taken during this time** on Canvas.
- Labs meet on Monday or Tuesday, depending on sections, in 103 [Plant Growth Facility](#).
- A detailed course schedule is [here](#). Please refer to this schedule closely throughout the semester.

Tuesday lecture format: Although the Tuesday session is referred to as a “lecture” period, this time will be dedicated to working in groups to answer reading questions and for large group discussion. For all the Tuesday lecture sessions, you will be asked to

1. Read the weekly reading assignment and take the pre-reading quiz on canvas BEFORE 10 am on Tuesday.
2. Come to class knowing your group assignment and be prepared to find your group’s seating area.
3. Hear a housekeeping update from your instructor.
4. Listen and take notes on the “By the numbers” overview of the crop of the week.
5. Work in small groups to discuss and formulate responses to questions referring to the weekly reading assignment.
6. Participate in a large group discussion in response to the weekly reading assignment questions.

You will receive points for attendance. Your lowest participation and pre-reading quiz grades will be dropped (i.e. if you miss a day, it will not affect your grade).

Lab format: Labs will be held in-person in room 103 in the Plant Growth Facility. The room is also referred to as the Agronomy Greenhouse Classroom 103. There are four lab activities that require all students to engage in activities outside. Please consider wearing appropriate clothing to be comfortable in inclement weather. You will be handling plants and soil during the lab activities, which may become messy. Each week, one or more plant families will be covered. You will learn about agriculturally important species within these families and the food and fiber products made from them. There are only 9 lab meetings during the semester, so it is important that you attend all of them.

Lecture format: Lecture videos will be made available on canvas and must be watched anytime outside of official course meeting times during the assigned week.

Communication: Please direct all questions, concerns, and requests to both instructors - Professor Jungers and James. Please communicate with us by email and include the course number in the subject line of the message. Do not expect replies from the instructors outside of

normal working hours (8 am to 6 pm). Please be sure that your message is clear and relatively formal; please don't write to us as if we're communicating on twitter! See [this article](#) for more information on effective communication with instructors.

Make-up sessions for excused absences: Peer-to-peer interaction is a critical component of your college experience. Although we have learned to facilitate classroom interaction through virtual formats, these virtual interactions do not replace the experience of in-person interactions and engagement. The Tuesday discussion classes are designed to offer in-person interactions and this class provides points to students who participate in those sessions. However, you should not come to class if you are feeling ill or if you have tested positive for COVID-19. Make-up sessions will be available for [legitimate absences](#) during the Thursday lecture period (10:15 - 11:30 am). The make-up sessions will be held via Zoom and include a discussion with your instructor and any other students who missed the session. If you plan to attend a make-up session, **you must notify the instructor at least 24 hours in advance** via email.

Make-up exams: Everyone is expected to take all exams as scheduled. If you are unable to take an exam because of a [legitimate absence](#), you must provide written verification one week prior to the absence and make arrangements for a make-up of the exam to be taken within one week of the exam date. A grade of zero (0) will be recorded for “no shows” on exams. Make-up exams will necessarily have different but equal content as the original exam.

Late assignment submissions: The due dates for all assignments are available to you at the start of the semester. Therefore, you will have all the information you need to properly plan ahead to ensure that your assignments are submitted on time. If you experience a [legitimate absence](#) as defined by the University of Minnesota Policy, the deadline may be adjusted. If you are unable to complete an assignment because of a legitimate absence, you should contact the instructors in advance of the due date to make arrangements.

If you happen to submit an assignment late, 10% of the total points will be deducted for each day that the assignment is late.

Incompletes: All assignments must be completed to meet the requirements for this course. Incomplete assignments not completed by the end of the semester will receive a grade of zero (0). This includes all problem sets, laboratory quizzes, exams, etc.

Extra work to benefit individual students: There is no option for students to submit “extra” work in an attempt to raise their grade. Mid-term alerts will be provided for students who, on the basis of performance in the course through the sixth week of the semester, appear to be in danger of receiving a grade of D, F, or N. We will continually post grades on Canvas throughout the semester; students are encouraged to continually monitor their progress.

Office Hours: Contact by email to set up an appointment.

Prerequisites: There are no prerequisites for this course.

Technology requirements: Students must have access to a computer during the lecture periods to take quizzes on canvas.

Lecture exam format: Lecture exams will take place during the Tuesday in-person session. Exams must be taken in-person. Exams are 100 points and include between 40 and 60 questions. The exams are designed to take 50 minutes to complete and will be available on canvas from 10:15 to 11:30 am. Notes can be used during the exam, but must be printed. No computers or phones can be used during the exam.

Lab quiz format: Lab quizzes will be conducted on Canvas and will take *place during the Thursday scheduled lecture period*. Quizzes can be taken at home. Quizzes are worth 30 points, contain about 30 questions, and are designed to be completed in 30 minutes. You will have the entire class period from 10:15-11:30 to complete the quiz. Quizzes must be taken alone! Evidence of sharing answers will result in a score of 0 for all students involved.

Exams and Grading Procedures:

3 lecture exams @ 100 points each	300 points
Discussion Participation 11 @ 10 points each*	100 points
• Pre-Discussion Canvas Questions (5 points)	
• Attendance and participation (5 points)	
Paper responses, 3 @ 20 points each	60 points
Lab reports, 3 @ 20 points each, 1 @ 30 points	90 points
Lab quizzes, 3 @ 30 points each	<u>90 points</u>
Total possible points	640 points

*The lowest pre-discussion quiz and participation grade in any given week will be dropped.

Letter grades for the course will be assigned as indicated in the following table. The score assigned to each grade is the minimum necessary score to achieve the grade.

Score	Grade
95% or higher	A
90 - 94%	A-
87 - 89	B+
84 - 86	B

80 - 83	B-
77 - 79	C+
74 - 76	C
70 - 73	C-
65 - 69%	D+
60 - 64%	D
60	F

Other Items of Importance:

We view this class and the overall educational experience at the University of Minnesota as a significant investment of time, energy, and financial resources by students. This investment will provide benefits of employment opportunities, life-long learning, environmental awareness, and social connections. We appreciate you selecting the University of Minnesota for this investment and are available to help and advise you to achieve your goals.

Student Workload Statement: Student workload expectations are an estimate of the amount of work needed for an average student to earn an average grade. We estimate that for each credit, three hours of academic work or 12 hours total are required per week. This includes lectures, laboratories, homework, and independent study.

Scholastic Dishonesty: You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code:

http://regents.umn.edu/sites/regents.umn.edu/files/policies/Student_Conduct_Code.pdf) If it is determined that a student has cheated, the student may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: <http://policy.umn.edu/education/instructorresp>.

The Office for Community Standards has compiled a useful list of Frequently Asked Questions

pertaining to scholastic dishonesty:

<https://communitystandards.umn.edu/avoid-violations/avoiding-scholastic-dishonesty>. If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

Appropriate Student Use of Class Notes and Course Materials: Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see:

<http://policy.umn.edu/education/studentresp>.

Sexual Harassment: "Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy:

https://regents.umn.edu/sites/regents.umn.edu/files/policies/Sexual_Harassment_Sexual_Assault_Stalking_Relationship_Violence.pdf

Equity, Diversity, Equal Opportunity, and Affirmative Action: The University provides equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy:

http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO_AA.pdf.

Disability Accommodations: The University of Minnesota views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you have, a disability in any area such as, mental health, attention, learning,

chronic health, sensory, or physical, please contact the DRC office on your campus (UM Twin Cities -612.626.1333) to arrange a confidential discussion regarding equitable access and reasonable accommodations.

Students with short-term disabilities, such as a broken arm, can often work with instructors to minimize classroom barriers. In situations where additional assistance is needed, students should contact the DRC as noted above.

If you are registered with the DRC and have a disability accommodation letter dated for this semester or this year, please contact your instructor early in the semester to review how the accommodations will be applied in the course.

If you are registered with the DRC and have questions or concerns about your accommodations please contact your (access consultant/disability specialist).

Additional information is available on the DRC website: (UM Crookston - <https://www.crk.umn.edu/units/disability-resource-center>, UM Duluth - <http://www.d.umn.edu/disability-resources>, UM Morris - <http://www.morris.umn.edu/academicsuccess/disability/>, UM Rochester - <http://r.umn.edu/student-life/student-services/disability-resources>, UM Twin Cities - <https://diversity.umn.edu/disability/>) or e-mail (UM Crookston - myers062@crk.umn.edu, UM Duluth - access@d.umn.edu, UM Morris - hoekstra@morris.umn.edu, UM Rochester - sdzavada@r.umn.edu, UM Twin Cities - drc@umn.edu) with questions.

Mental Health and Stress Management: As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus at The Boynton Health Center is available to provide help.

<http://www.bhs.umn.edu/health-information/index.htm>;

<http://www.bhs.umn.edu/east-bank-clinic/mental-health-services.htm>