

# Introductory Plant Sciences AGRO 1110G/HORT 1115G Spring 2021 Syllabus

**Lecture:** Asynchronous online through Canvas

**Instructor:** Prof. Rachel Gioannini  
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Office Hours: F 1-2pm and by appt., both on zoom

**Labs, online and face to face!**

<b>M1A:</b> Mon 1:30-3:50pm	<b>M1B:</b> Tues 10:30am-12:50pm
<b>M1C:</b> Tues 1:30-3:50pm	<b>M1E:</b> Thurs 1:30-3:50pm

**Lab Instructors/Teaching Assistants:**

<u>Name</u>	<u>email</u>	<u>Lab time(s)</u>	<u>Office Hours</u>
Subhankar Mandal	mandals@nmsu.edu		By appt.
Stephanie Torres	storr305@nmsu.edu		By appt.
Govinda Sapkota	govinda@nmsu.edu		By appt.

**Course Description:**

Introduction to the physical, biological, and chemical principles underlying plant growth and development in managed ecosystems. In the laboratory portion of the class, students perform experiments demonstrating the principles covered in lecture. The course uses economic plants and agriculturally relevant ecosystems to demonstrate basic principles. Appropriate for non-science majors.

**Course Objectives:**

1. Describe the role plants play in everyday lives
2. Introduce career opportunities in plant and soil sciences, and related fields
3. Define plants through the concepts of plant structure and anatomy
4. Explain the wide variety of plants cultivated throughout the world
5. Illustrate how plants function (growth, reproduction, physiology, and soil)
6. Describe how plants are manipulated to feed, clothe and entertain the world

**Course Materials:**

**REQUIRED BOOK:** Plants and People. James D. Mauseth. 2012. Jones & Bartlett Learning. ISBN-13: 978-1449657178.

**NMSU CANVAS** (<http://learn.nmsu.edu>). Materials related to class lectures and laboratories will be available online. Students should check **both** their AGRO 1110G or HORT 1115G Lecture CANVAS page and their AGRO 1110G/HORT 1115G Laboratory CANVAS page at least 24 hours before each class period for announcements, updates and information. In addition, students should have their CANVAS notifications to arrive either immediately or daily to stay up to date with the course. It is the student's responsibility to take notes during lectures and labs.

## **COVID 19**

The lecture portion of this course will be online only, and as such, no specific COVID 10 precautions will need to be adopted. For the 4 face-to-face labs, larger labs will be divided into smaller groups and will meet in an outdoor location. You will be required to follow the normal COVID procedures of masks and social distancing. If you do not wear a mask to lab, you will be asked to leave.

## **COURSE DELIVERY METHOD**

The course modules will be presented in a synchronous method, but not self-paced. Students will complete all assignments online, including learning modules, online quizzes, participate in discussions and submit assignments. All modules will be released on Fridays at midnight and due by the following Sunday at 11:59pm. All assignments need to be turned in on or before the due date. Late assignments will be accepted only in case of emergency (with a doctor's note or other proof). When possible, please contact me IN ADVANCE so that alternatives can be arranged. Work, other class loads, and travel are not considered emergencies.

## **COURSE ORGANIZATION**

This course will be organized into modules, according to the course map. The course map will show the overall plan for the course and the modules will spell out the various assignments, readings and assessments for each section.

## **COMMUNICATION**

The majority of our communication will take place through Canvas email and announcements. Please set your Canvas account profile *New Announcements* in Notifications to *Right Away* (Go to Profile>Notifications, find *Announcements* and set to “*√ Notify me right away*”. You may also wish to change the setting on other notifications and can get a daily summary of course interactions.)

I will send announcements to communicate with the class as a whole. Email and Zoom will be used for one-on-one communication. I will respond to Canvas Inbox correspondence within 24 hours in general, usually less. It may take up to 48 hours on weekends and holidays.

## **PREREQUISITES**

There are no prerequisites for this course.

## **ONLINE PREPARATION**

I would expect you will spend 3 to 5 hours per week on this course. This is somewhat dependent upon your reading speed. Think of your time investment this way: in a face-to-face format, this course would meet for 2.5 hours a week, plus time for homework and reading. Think of your time reading and reviewing materials as taking the place of face-to-face class time. Your participation and thoroughness is linked to how much time you are willing to devote.

## **REQUIRED TECHNICAL SKILLS**

Taking an online course requires technical skills as well as other soft skills. However, at a minimum you will need to meet certain technology abilities to complete work for this course. To begin in this course, you must:

- Be able to obtain access to an internet connection, preferably broadband, and a working computer for the duration of this course. Please use Google Chrome or Firefox for your internet browser as these work best with Canvas.
- Be proficient with Microsoft© Office applications.
- Be able to send and receive emails and email attachments in and out of class.
- Be able to navigate Canvas and change your Notification settings.
- Be able to maintain backups of all work you create for this course.

## **TECHNOLOGY REQUIREMENTS**

### **Computer Hardware & Software**

- Access to a Windows or Macintosh desktop computer or laptop with internet access, sound, and speakers. A camera for Skyping is helpful.
- Canvas Learning Management System
  - [NMSU Canvas \(Links to an external site.\)](#) login
  - [Canvas student FAQ \(Links to an external site.\)](#)
- [Microsoft Office 2007 or higher \(Links to an external site.\)](#)
- [Adobe Reader \(Links to an external site.\)](#) (for reading PDF files)
- Adobe Connect – built into Canvas. No download needed.
- Option, depending on where you'll be working--headset with microphone.

### **Web Browsers**

Use only the latest version of Google Chrome or Mozilla Firefox for Canvas. Safari, Internet Explorer, and Microsoft Edge have known issues that can interfere with performing basic tasks within Canvas. The links to download the recommended browsers as well as instructions on how to ensure you have the latest version are listed below:

- [Download Google Chrome \(Links to an external site.\)](#)
- [How to update Google Chrome \(Links to an external site.\)](#)
- [Download Mozilla Firefox \(Links to an external site.\)](#)
- [How to update Mozilla Firefox \(Links to an external site.\)](#)

Canvas does not fully support mobile devices; while there is a free Canvas mobile app available through iTunes store, a lot of functionality is unavailable when using a mobile phone. When you take this course, it is assumed you have access to a computer or laptop for full access to functionality in this course.

## **GRADING AND FEEDBACK**

Online quizzes and exams (Multiple choice and T/F) will be graded immediately. If there are short answer questions, grades will be posted within one week of the due date. Homework and lab assignments will be graded within one week of the due date.

## **GRADING POLICY**

### **Grading summary:**

Laboratory (14 total, lowest grade dropped, 13 x 10 pts).....	260 pts
Weekly Module Reviews (11 total, lowest grade dropped, 10 x 10 pts) .....	100 pts
Tests (3-4 modules together, 4 x 50 pts).....	200 pts
Homework (7 x 20 pts) .....	140 pts
Final Homework .....	100 pts.
Plant Topic First Draft.....	40 pts.
Plant Topic Paper.....	100 pts
<b>TOTAL POINTS AVAILABLE.....</b>	<b>940 pts</b>

### **Final grades:**

A total of 940 points will be available for grading purposes. No +/- grades will be assigned. Students taking the course "pass/fail" must have at least 700 pts. to "pass".

- A = 940-846 pts./90-100%
- B = 845-751 pts./80-89.9%
- C = 750-656 pts./70-79.9%
- D = 655-561 pts./60-69.9%
- F = below 560 pts/<59.9%

Extra Credit If opportunities for extra credit become available, they will be presented in the weekly announcements.

## **PLANT TOPIC PAPER**

The biggest assignment of this course is the Plant Topic Paper. There are three due dates associated with this paper: Topic (Due Feb. 28, 11:59pm), First draft (Due March 28, 11:59pm) and final submissions (Due April 25, 11:59pm) Ms Gioannini and the TA's will review all paper topics for approval. General paper topics will not be approved. No two students may have the same topic. Papers will be submitted electronically through CANVAS (learn.nmsu.edu) as either a word document (doc/docx) or an Adobe Acrobat File (pdf) **ONLY**.

**Paper topic examples (these are general topic areas, your topic must be more specific to include a specific plant, plant trait, etc.)**

- How should genetically modified plants be managed and how will they affect humankind?
- How will global warming affect plants on Earth and how will plants affect global warming?
- On a global scale, how can an ever expanding population be fed while reducing soil erosion, reducing new land development, and preserving natural ecosystems?
- In the Mesilla Valley of New Mexico, how can crop production agriculture be sustained with increased domestic and international competition, decreasing resources, and increased urbanization?
- With the recent food safety scares involving fresh produce, how can we ensure that produce is safe to eat?
- Should corn be grown for ethanol fuel and what effect will increased corn production have on commodity prices, fuel costs, energy dependence, and the environment?
- Why does steer manure smell so bad when it's fresh and so "sweet" when it's composted?
- With the increased prices for farm commodities such as corn, wheat, soybeans, etc., should U.S. farm subsidies and price supports continue? Why or why not?
- If the human population keeps growing and arable farmland keeps decreasing at their current rates, when will we run out of food?
- Is the US agriculture really feeding the world?
- Why do we grow different crops in New Mexico than in Pennsylvania?

## **POLICIES**

### **Lecture Participation**

The lecture is asynchronous and you are expected to keep on top of reading, reviewing powerpoints, and assignments and due dates. All of this is presented in the course map. Modules will be released on Friday at midnight and are due the following Sunday at 11:59pm, so you have 2 full weekends to complete each module. Due dates will be strictly enforced.

### **Laboratory Participation and Attendance**

#### *Online Labs.*

Each lab section will have its own canvas page. The lab instructors will upload videos and assignments on a weekly basis. The assignments will have a due date and each lab will have the same late submission policies.

#### *Face-to-Face (F2F) Labs.*

There will be **4 F2F labs**. The instructor will send an email directing you to the meeting location. To ensure social distancing, you will be meeting F2F in groups of 5 students at a time and each group will meet with the instructor for a maximum of 30 minutes. All F2F labs will be outdoors, so be prepared for whatever the weather offers on that day.

#### *Grading.*

Attendance and participation in the laboratory section is mandatory for all students. Points earned in laboratories **cannot** be made up. A student who misses three (3) or more laboratories will receive no points for the laboratory section (260 points). A student who arrives five (5) or more minutes late to class will be considered absent, but may be able to complete the day's activities with the teaching assistant's permission. There will be **LAB NO MAKEUP** options.

### **Late Assignments**

**Late submissions lose 50% of total points per day that it is late; not accepted if more than 2 business days late.** This is true for both the laboratory and lecture portion of the course.

**There will be NO MAKEUPS without an official medical excuse.**

### **Office Hours and Getting Help**

Office Hours are available **by appointment through Zoom** with the course and laboratory instructors. These hours are first come, first serve. You may also email Ms. Gioannini or your lab TA at any time to ask for clarification, guidance or any questions you have. We are all more than happy to help you.

### **Online Quizzes**

There will be 11 module reviews and 3 module tests which will have time limits. You may use your notes or whatever resources you like for these reviews and tests, but you will probably not have time to look up every single answer. I would encourage you to study the material and your notes and to take the reviews/tests in a timely manner.

## **ACADEMIC MISCONDUCT and PLAGIARISM**

**Academic misconduct including plagiarism will not be tolerated** in the Plant and Environmental Sciences Department. The Department follows the policies and procedures pertaining to academic misconduct and plagiarism found in the NMSU Student Code of Conduct available online at <https://studenthandbook.nmsu.edu/>

Students at NMSU are expected to observe and maintain the highest academic, ethical, and professional standards of conduct. Any student found guilty of academic misconduct shall be subject to disciplinary action.

### **Academic misconduct is defined as, but is not limited to, the following actions:**

1. Cheating or knowingly assisting another student in committing an act of cheating or other forms of academic dishonesty;
2. Plagiarism, which includes, but is not necessarily limited to, submitting examinations, themes, reports, drawings, laboratory notes, undocumented quotations, computer-processed materials, or other material as one's own work when such work has been prepared by another person or copied from another person;
3. Unauthorized possession of examinations, reserve library materials, or laboratory materials;
4. Unauthorized changing of grades on an examination, in an instructor's grade book, or on a grade report; or unauthorized access to academic computer records;
5. Nondisclosure or misrepresentation in filling out applications or other university records in, or for, academic departments or colleges.

### **Academic Misconduct Class Policy:**

**Cheating will not be tolerated on any class activity.** Any student caught cheating will receive **zero** points for the activity. In addition, the student may be subjected to further disciplinary action at the university level (e.g., hearing with possible dismissal from the university). Plagiarism is a crime, in addition to being academically dishonest, and will not be tolerated. Plagiarism can be committed unintentionally by quoting or copying others' works without providing the proper credit (literature citations). Ask the instructors for help if you are unsure about plagiarism. Plagiarism is easy to spot; please just don't do it. When in doubt, use a citation within the text to indicate you are using someone else's work, ideas or thoughts.

## **NMSU STUDENT RESOURCES & POLICIES**

Please visit <https://provost.nmsu.edu/faculty-and-staff-resources/syllabus/policies> for university policies and student services, including Discrimination and Disability Accommodation, academic misconduct, student services, final exam schedule, grading policies and more.

## CLASS AND LAB ACTIVITY SCHEDULE\*

<b>Module</b>	<b>Activities/Assignments</b>	<b>Assessments</b>	<b>Lab Topic</b>
Module 1 Getting Started (Jan. 25-31)	1. Watch "Intro to Plant Science" video 2. Read course syllabus 3. Review course map 4. Read "How to succeed in this course"	<b>DUE JAN. 31</b> 1. Complete Module 1 review (10 pts) 2. Sign the "How to succeed in this course" agreement (10 pts.) 3. Homework: "Introductions" discussion board (20 points)	<b>NO LAB THIS WEEK</b>
Module 2 Introduction to Plants (Jan. 30-Feb. 7)	1. Read Chapter 1, p. 1-17 2. Review "What is a plant?" 3. Review "People and Plants"	<b>DUE FEB. 7</b> 1. Complete Module 2 review (10 pts) 2. Homework: Plant Journal (20 pts)	<b>Lab orientation</b>
Module 3 Plant Sciences (Feb. 6-14)	1. Review "Plant Careers" 2. Review Plant Paper Assignment 3. Review "Agro vs. Hort"	<b>DUE FEB. 14</b> 1. Complete Module 1-3 test (50 pts)	<b>Campus tour</b>
Module 4 (Feb. 13-21)	1. Read Ch. 2, p. 21-33 2. Read Ch. 3, p. 63-73 3. Review "Roots, shoots and leaves"	<b>DUE FEB. 21</b> 1. Complete Module 4 review (10 pts)	<b>Library tour</b>
Module 5 (Feb. 20-28)	1. Read Ch. 2, p. 21-33 2. Read Ch. 7, p. 162-170 3. Review "Fruits and Flowers"	<b>DUE FEB. 28</b> 1. Complete Module 5 review (10 pts) 2. Homework: Submit plant paper topic (20 pts)	<b>FACE TO FACE</b> <b>Vegetable Planting</b>
Module 6 (Feb. 27-March 7)	1. Read Ch. 2, p. 33-38 2. Review "Flora and Fauna" 3. Review "Life Spans"	<b>DUE MARCH 7</b> 1. Complete Module 6 review (10 pts) 2. Homework: Myth Busters (20 pts)	<b>Plant structure</b>
Module 7 (March 6-14)	1. Read Ch. 2, p. 38-40 2. Review "Herbs and Woody Plants"	<b>DUE MARCH 14</b> 1. Complete Module 4-7 test (50 pts)	<b>Flower structure</b>
Module 8 (March 13-21)	1. Read Ch. 3, p.44-63 2. Review "Plant Cells"	<b>DUE MARCH 21</b> 1. Complete Module 8 review (10 pts) 2. Homework: First Draft of Plant Paper(40 pts)	<b>Plant sexual reproduction</b>
Module 9 (March 20-28) <b>Last day to withdraw with a W is March 25</b>	1. Read Ch. 7, p. 145-156 2. Review "Reproduction"	<b>DUE MARCH 28</b> 1. Complete Module 9 review (10 pts)	<b>Mesilla Valley Tour</b>
Module 10 (March 27-April 4)	1. Read Ch. 6 2. Review "Plant Hormones and Growth"	<b>DUE APRIL 4</b> 1. Complete Module 10 review (10 pts) 2. Homework: "What's Blooming?" (20 pts)	<b>FACE TO FACE</b> <b>Chile grafting</b>

Module 11 (April 3-11)	1. Read Ch. 5 2. Review "Respiration" 3. Review "Photosynthesis"	<b>DUE APRIL 11</b> 1. Complete Module 8-11 test (50 pts)	<b>FACE TO FACE</b> Asexual reproduction
Module 12 (April 10-18)	1. Read Ch. 4 2. Review "Plant Nutrition and Soils" 3. Review "Organic vs Conventional"	<b>DUE APRIL 18</b> 1. Complete Module 12 review (10 pts) 2. Homework: Regenerative Farming (20 pts)	<b>Organic agriculture</b>
Module 13 (April 17-25)	1. Review "Sustainability" 2. Review "Hydroponics" 3. Review "Climate Change"	<b>DUE APRIL 25</b> 1. Complete Module 13 review (10 pts) 2. Plant Paper Due (100 pts)	<b>Hydroponics</b>
Module 14 (April 24-May 2)	1. Read Ch. 8, p. 173-190 2. Read Ch. 12, p. 295-302 3. Review "Biotech" 4. Review "Where plants originate"	<b>DUE MAY 2</b> 1. Complete Module 14 review (10 pts) 2. Homework: The Great Debate (20 pts)	<b>Medicinal Plants</b>
Module 15 (May 1-9)	1. Read Ch. 14 2. Read Ch. 15 3. Review "Spices, Herbs, Beverages and Medicinals"	<b>DUE MAY 9</b> 1. Complete Module 12-15 test (50 pts) 2. Homework: Final Presentation (100 pts)	<b>FACE TO FACE</b> Vegetable planting follow up
EXAM WEEK	<b>There is no final exam for this course.</b>		<b>No labs this week</b>

**\*Subject to change. What is shown in Canvas Modules overrides this schedule.**