AG23 Introduction to Plant Science

Course Information

Semester & Year: Fall 2024

Course ID and Section number: AG-23-E7404

Instructor's name: Luke A. Besmer

Day and time of required meetings: Mondays & Wednesdays 1:30-4:00

Location: Applied Technology, Room 108

Course units: 3.00

Recommended Textbook: **Plant Science: Growth, Development, and Utilization of Cultivated Plants** by McMahon, Margaret E. (9780135184820) - 6TH Edition (Older editions are acceptable)

Instructor Contact Information

Office location or Online: Applied Technology, Room 108

Office hours: Mondays & Wednesdays 11:30-12:30

Phone number: 707-342-7354

Email address: luke-besmer@redwoods.edu

Communication notes: Alternative office hour meeting times can be set up to accommodate student schedule conflicts.

Catalog Description

Introduction to plant science including structure, growth processes, propagation, physiology, growth media, biological competitors, and post-harvest factors of food, fiber, fuel, and ornamental plants. Laboratory required.

Course Student Learning Outcomes

- Analyze the structure components of higher plants, their functional roles, and their economic values.
- Discuss and understand photosynthesis, respiration, translocation, and other important metabolic pathways.
- Describe sexual and asexual reproduction and how that applies to propagation in the agricultural setting.
- Discuss and understand nutrient deficiencies, pest issues, and their management.
- Utilize modern testing methods to gain information that can be used to make informed decisions in the field.

Evaluation & Grading Policy

Final Course Grade will be Calculated as Follows

Assignment	#	Points	Total Points
Weekly Homework	8	10	80
Current Research Reviews	8	15	120
Laboratory Exercises & Write Ups	12	35	420
Report/Presentations	1	80	80
Mid Semester Exams	2	100	200
Final Exam	1	100	100

Extra Credit Opportunities Will be Available   1000

Late Assignments: All assignments are due by the date noted on Canvas. Exceptions may be made for reasonable circumstances.

Exams: Exams will take place in person during the scheduled time unless otherwise specified by your instructor. Accommodations can be made as necessary.

Homework: Assignments will typically be made on Mondays and will be applicable to topics or questions posed in class. We will discuss them the following Wednesday.

Research Reviews: Research papers will be posted to Canvas by Wednesday and will be discussed the following week.

Reports/Presentations: Students will identify a crop they would like to cultivate. Students will write a 4-6 page report on the plant, its growth requirements, physiology, common pest and/or disease issues, cultural significance, economic history, and market future. Students will present their "Crop Report" to the class at the end of the semester.

AG 17 Intro to Soil Science Course Schedule

Week	Dates	Lecture Topic	Reading	Lab Activity
1	8/26	The Soil Around Us	Chapter 1	1. Safety, Chemistry & Math Review
	8/28	Soil Formation	Chapter 2	2. Minerals, Rocks, and Soil Formation
2	9/2	No Class	Read Ahead	NA
	9/4	Soil Classification	Chapter 3	3. Soil Horizons and You
3	9/9	Physical Properties	Chapter 4	4. Classificaiton/Web Soil Survey
	9/11	Soil Water	Chapter 5	
4	9/16	Hydrologic Cycle	Chapter 6	5. Soil Sense: Color/Texture/Density
	9/18	Aeration & Temperature	Chapter 7	
5	9/23	Unit Review	Study Read Ahead	Lab Review
	9/25	**Exam 1**		Dream Farm Project
6	9/30	Colloids	Chapter 8	6. Water Holding Capacities
	10/2	Soil Activity	Chapter 9	7. Colloidial Charge
7	10/7	Dry Region Soil	Chapter 10	
	10/9	Ecology	Chapter 11	Field Study
8	10/14	Review/Catch Up	Catch Up	8. Soil pH, EC, and CEC
	10/16	Review /Catch Up	Catch Up	

9	10/21	Organic Matter	Chapter 12	9. Soil Respiration
	10/23	Nitrogen & Sulfur	Chapter 13	10. Nutrient testing
10	10/28	Phosphorus & Potassium	Chapter 14	10. Nutrient testing
	10/30	CalMag, Si, Micros	Chapter 15	10. Nutrient testing
11	11/4	Unit Review	Study Read Ahead	Lab Review
	11/6	**Exam 2**		NA
12	11/11	No Class	NA	NA
	11/13	Nutrient Management	Chapter 16	11.Reading & Reparing: Soil Tests
13	11/18	Erosion	Chapter 17	12. Erosion & Pollution
	11/20	Soil Pollution	Chapter 18	
14	11/25	Fall Holiday	NA	NA
	11/27	Fall Holiday	NA	NA
15	12/2	Geographic Soil Info	Chapter 19	Lab Catch Up
	12/4	Soil and the Future	Chapter 20	Final Review
16	12/9	Presentations	NA	Presentations
	12/11	Presentations/Review	NA	Presentations
17	**12/16**	**Final Exam**	NA	
	12/18		NA	

Schedule is Subject to Change

Prerequisites/corequisites/ recommended preparation

EGNL1A – College Composition advised

Educational Accessibility & Support

College of the Redwoods is committed to providing reasonable accommodations for qualified students who could benefit from additional educational support and services. You may qualify if you have a physical, mental, sensory, or intellectual condition which causes you to struggle academically, including but not limited to:

- Mental health conditions such as depression, anxiety, PTSD, bipolar disorder, and ADHD
- Common ailments such as arthritis, asthma, diabetes, autoimmune disorders, and diseases
- Temporary impairments such as a broken bone, recovery from significant surgery, or a pregnancy-related disability
- A learning disability (such as dyslexia, reading comprehension), intellectual disability, autism, or acquired brain injury
- Vision, hearing, or mobility challenges

Available services include extended test time, quiet testing environments, tutoring, counseling and advising, alternate formats of materials (such as audio books or E-texts), assistive technology, on-campus transportation, and more. If you believe you might benefit from disability- or health-related services and accommodations, please contact Student Accessibility Support Services (SASS). If you are unsure whether you qualify, please contact SASS for a consultation: sass@redwoods.edu.

SASS office locations and phone numbers

Eureka campus

- Phone: 707-476-4280
- Location: Student Services Building, first floor

Del Norte campus

- Phone: 707-465-2324
- Location: Main Building, next to the library

Klamath-Trinity campus

- Phone: 707-476-4280

Student Support Services

Good information and clear communication about your needs will help you be successful. Please let your instructor know about any specific challenges or technology limitations that might affect your participation in class. College of the Redwoods wants every student to be successful.

The following online resources are available to support your success as a student:

[CR Online Learning Support](#)

Tech support, laptop loans, guides to using Canvas, installing Office 365 for free, and more.

[Library Articles & Databases](#)

Find the best library databases for your research.

[Online Tutoring Resources](#)

Participate in tutoring over Zoom.

To learn more about the resources available to you, click on a title bar below, or click the down arrow to expand them all.

Klamath-Trinity students can contact the CR Klamath-Trinity Office for specific information about student support services at 530-625-4821.

Community College Student Health and Wellness

National Suicide Prevention Lifeline

If you are in distress or are with someone at risk right now, call or text the National Suicide Prevention Lifeline.

Call the National Suicide Prevention Lifeline
1-800-273-TALK (8255)

Text the National Suicide Prevention Lifeline
741-741

Timely Care

When you're not feeling well physically or distressed mentally, Timely Care can offer the help you're looking for in just a few quick taps. Students can schedule an appointment anytime via phone, video, and chat. Log in or set up an account with Timely Care.

Mental Health Counseling

Students should text, email, or fax Shawna Bell directly for scheduling and/or services.

- Text: 707-496-2856
- Email: shawnabmft@gmail.com
- Fax and voicemail: 707-237-2318

Wellness Central

Resources, tools, and trainings regarding health, mental health, wellness, basic needs and more designed for California community college students, faculty and staff are available on the California Community Colleges Wellness Central.

Counseling

Counseling and Advising can assist students in need of academic advising and professional counseling services. Call, email or stop by one of our offices to make an appointment!

Counseling and Advising office locations and contact info

Eureka campus
- Phone: 707-476-4150
- Location: Student Services Building, first floor
- Email: counseling@redwood.edu
- Hours: Monday through Friday, 9am to 4pm. Summer hours may vary

Del Norte campus
- Phone: 707-476-2300
- Location: Main Building, next to the library
- Hours: Summer hours may vary

Klamath-Trinity campus
- Phone: 530-625-4821
- Email: KT-staff@redwoods.edu
- Hours: Summer hours may vary

Basic Needs Center

The Basic Needs Center provides for the health and safety of students by providing access to healthy food, financial resources, and referrals to safe and secure housing. Submit a request for services and information.

Basic Needs Center contact info
- Phone: 707-476-4153
- Email: the-grove@redwoods.edu

Learning Resource Center

The Learning Resource Center includes the following resources for students:

Library Services

Library Services promotes information literacy and provides organized information resources.

Multicultural and Equity Center (MCE)

The Multicultural and Equity Center is a dynamic and inclusive place that supports all students in their academic and personal journeys at the college. We do this by creating community, home away from home, and a safe place for cultural expression, cross-cultural learning, access to college and dignity resources, and social justice work opportunities. The MEC is committed to retention and student success by offering activities related to leadership development, student connectedness and student equity. We are a student-centered program that fosters respect for all people.

Academic Support Center

The Academic Support Center offers tutoring and test proctoring for CR students.

Student Tech Help

Student Tech Help provides students with assistance around a variety of tech problems.

Extended Opportunity Programs and Services (EOPS)

Extended Opportunity Programs and Services (EOPS) provides services to eligible income disadvantaged students including: textbook awards, grants, career academic and personal counseling, transportation assistance, tutoring, laptop, calculator and textbook loans, priority registration, graduation cap and gown, workshops, and more!

TRiO Student Success Program

The TRiO Student Support Services Program provides eligible students with a variety of services including academic advising, career assessments, assistance with transfer, and peer mentoring. Students can apply for the program with the Eureka TRiO office or the Del Norte TRiO office.

Veterans Resource Center

The Veteran's Resource Center supports and facilitates academic success for Active Duty Military, Veterans and Dependents attending CR through relational advising, mentorship, transitional assistance, and coordination of military and Veteran-specific resources.

CalWORKS

California Work Opportunity & Responsibility to Kids (CalWORKs) provides supportive services to student parents with children under the age of 18, who are receiving cash assistance (TANF benefits), to become self-sufficient. Services

include: transportation assistance, basic student supplies, tutoring, priority registration, laptop and calculator loans, career, academic, and personal counseling, and more!

Fall 2024 Dates

Date	To Remember
August 23	Last day to register for classes (day before the first class meeting)
August 24	Classes begin
August 30	Last day to add a class
September 2	Labor Day Holiday (district wide closure)
September 6	Last Day to Drop & Receive a Refund
September 8	Last Day to Drop w/out a "W"
September 9	Census Date (20% of class)
October 31	Last Day to Petition to Graduate & Petition for Certificate
November 1	Last Day for Student/Faculty Withdrawal
November 11	Veteran's Day Holiday (District Wide Closure)
November 25-26	Fall Break (No Classes)
November 27-29	Thanksgiving Holiday (District Wide Closure)
December 14-20	Final Examinations
December 20	Last Day to File P/NP Option
December 20	Semester Ends
December 27	Grades Due
January 3	Grades Available for Transcript Release

Academic dishonesty

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the student's status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is

available on the College of the Redwoods website. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [2023-2024 College Catalog](#) and [CR Board and Administrative Policies](#).

AI Use Class Policy

Recent advancements in generative artificial intelligence (AI) have made large language models such as ChatGPT and Google's Bard widely available. However, overuse of these tools in this class can undermine your learning and curtail the development of your critical and creative thinking skills. In addition, AI outputs are often unreliable and frequently subject to bias. For these reasons, the policy of this class is that AI cannot be used at any point in the completion of class assignments, including discussion posts. Any or all of your assignment submissions and discussion posts may be screened by AI detection software, but the real penalty for AI misuse is that you will miss out on an opportunity to learn.

Disruptive Behavior

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructor's directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process, a disruptive student may be temporarily removed from class. In addition, the student may be reported to the Chief Student Services Officer or designee. Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the [2023-2024 College Catalog](#) and [CR Board and Administrative Policies](#).

Inclusive Language in the Classroom

College of the Redwoods aspires to create a learning environment in which all people feel comfortable in contributing their perspectives to classroom discussions. It therefore encourages instructors and students to use language that is inclusive and respectful.

Canvas Information

- Log into Canvas at [My CR Portal](#)
- For help logging in to Canvas and general tech help, visit [Student Technical Support](#)
- Once you're logged in to Canvas, you click on the Help icon on the left menu
- Canvas online orientation workshop: [Canvas Student Orientation Course](#)

Setting Your Preferred Name and Pronouns in Canvas

Students have the ability to display personal pronouns and an alternate first name in Canvas. Students may change their pronouns on their own in Canvas (Account :: Settings :: Edit Settings). To request a change to your preferred list name, contact [Admissions & Records](#). Your Preferred Name will only be listed in Canvas; this does not change your legal name in our records. See the [Student Information Update Form (pdf)](#).

Emergency Procedures / Everbridge

College of the Redwoods has implemented an emergency alert system called Everbridge. In the event of an emergency

on campus you will receive an alert through your personal email and/or phones. Registration is not necessary in order to receive emergency alerts. Check to make sure your contact information is up-to-date by logging into WebAdvisor and selecting 'Students' then 'Academic Profile' then 'Current Information Update.'

Please contact Public Safety at 707-476-4112 or security@redwoods.edu if you have any questions. For more information visit Redwoods Public Safety.

In an emergency that requires an evacuation of the building anywhere in the District:

- Be aware of all marked exits from your area and building
- Once outside, move to the nearest evacuation point outside your building
- Keep streets and walkways clear for emergency vehicles and personnel

Do not leave campus, unless it has been deemed safe by the campus authorities.

To learn more about campus-specific Emergency Procedures, click on a title bar below, or click the down arrow to expand them all.