

CULTURALLY RESPONSIVE CURRICULUM MODIFICATIONS

COURSE NAME: AG 161 Introduction to Plant Science			
FACULTY NAME: Erin Krier		DATE SUBMITTED: 1/7/2025	
COURSE COMPONENT	PREVIOUS VERSION DESCRIPTION	CULTURALLY REponsive CHANGES DESCRIPTION(S)	CULTURES or LEARNING STYLES ADDRESSED THROUGH THESE REVISIONS
Syllabus	Previous syllabus with changes and additions in red font and deletions with strikethroughs can be found here: https://acrobat.adobe.com/id/urn:aaid:sc:US:f129a18a-a269-41a3-a77e-973e9125d0a2	- Quote at top of syllabus changed to reflect Indigenous relationships to plants - Course Aims language updated to reflect personal meaning in the goals of the class - Methods of Evaluation/Assignments updated to include a mid-term Personal Plant Project - Reading material suggestions added to reflect diverse cultural, racial, and gender identities of authors and content - Course schedule updated to add a more holistic approach to some of the class topics and to add the work on the new Personal Plant Project assignment - Absence policy language updated to acknowledge cultural, familial, religious, work, and health-related obligations, cares, and needs	The diverse and unique cultural backgrounds of any student in the class can be appropriately addressed via the personalized content changes of the syllabus document.
RESOURCES USED and where to find more information:			
Course Units	4 units	No change	n/a
RESOURCES USED and where to find more information:			
Reading Assigned/Textbook	Adopted Text: McMahon, M.E., A.M. Kofranek, and G.E. Rubatzky., <i>Plant Science: Growth, Development, and Utilization of Cultivated Plants</i> 5th Edition. Prentice-Hall, NJ, 2011. Other Materials: - Janick, Jules, Robert Schery, Frank Woods and Vernon Ruttan. <i>Plant Science: An Introduction to World Crops</i>, 3rd Edition. WH Freeman and Company, 1981. - Gardner, Franklin, R. Brent Pearce and Roger Mitchell. <i>Physiology of Crop Plants</i>. Iowa State University Press, 1985.	Added the following optional/suggested resources: <i>Plants, People, and Culture: The Science of Ethnobotany</i>; Balick, M. and Cox, P. <i>Braiding Sweetgrass: Indigenous Wisdom Scientific Knowledge and the Teachings of Plants</i>; Kimmerer, R. <i>The Perfect Specimen: The 20th Century Renown Botanist Ynés Mexia</i>; Anema, D. <i>The Botany of Desire: A Plant's-Eye View of the World</i>; Pollan, M. <i>Where the Gods Reign: Plants and Peoples of the Colombian Amazon</i>; Schultes and Plotkin, M. <i>The Vegetational History of the Oaxaca Valley and Zapotec Plant Knowledge</i>; Smith, C. and Messer, E. <i>Wild Apples</i>; Thoreau, H. <i>Our Fermented Lives: A History of How Fermented Foods Have Shaped Cultures & Communities</i>; Skinner, J. <i>Plants and People of the Golden Triangle: Ethnobotany of the Hill Tribes of Northern Thailand</i>; Anderson, E. <i>Goddesses, Elixirs, and Witches: Plants and Sexuality throughout Human History</i>; Riddle, J. <i>Reinventing Hoodia: Peoples, Plants, and Patents in South Africa</i>; Foster, L. <i>In Defense of Plants: An Exploration into the Wonder of Plants</i>; Candeias, M. <i>The Struggle for Maize: Campesinos, Workers, and Transgenic Corn in the Mexican Countryside</i>; Fitting, E - Robin Wall Kimmerer: 'Take What Is Given to You'; Bioneers Published: September 21, 2017 https://bioneers.org/robin-kimmerer-take-given-ztvz1709/#:~:text=If%20I%20could%20choose%20just,own%2C%20aren't%20we%3F	Great care was taken to select readings that encompass a wide variety of perspectives on plants and their role in diverse human histories. Works from every continent were included and are from a variety of authors with unique backgrounds and lived experiences. This is also intended to be a "living" list that will evolve over time as students enhance the diversity of the works by adding readings that contribute to their personal, historical, familial, and cultural identities.

CULTURALLY RESPONSIVE CURRICULUM MODIFICATIONS

		15. Julia Cordero-Lamb, Coastal Band of the Chumash Nation. <i>What Is, and What Can Be: Traditional Regenerative Horticulture in Syuxtun (Santa Barbara)</i> . Fall 2023. https://www.cnps.org/artemisija-journal/what-is-and-what-can-be-36500	
RESOURCES USED and where to find more information:			
Instructional Methods	This class is a lecture/lab class which lends itself well to experiential laboratory activities but is also heavy on lecture material during the lecture class meetings.	Individual weekly quizzes were largely replaced with small group assessments or collaborative class assessments using anonymous quiz games such as Socrative. This opened discussion for review in a low-risk, community setting. Laboratory activities were introduced with background content and minimum instruction for student lab groups to gain ownership of the lab experiment/activity and use their strengths to interact with the material in a way that provides more context and meaning.	This established a learning environment in which all types of learners could choose to experience the material in a way that is most appropriate for them and to be exposed to other students' ways of knowing.
RESOURCES USED and where to find more information:			
Assignments	The main project for this class has always been to write a research paper documenting the field trial the class runs at the student farm. Students have always been given the decision-making power to determine what the experimental treatments will be but the research paper being the only big project was limiting in the exploration of other ways to interact with the science of plants.	Two changes were made for the large class project: 1. Field Trial Research Paper – an additional research paper was added to the reading assignment (Marks, R. et al. <i>A critical analysis of plant science literature reveals ongoing inequities</i> Proceedings of the National Academies of Science: 2023 March 7 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10013813/) to invoke thought and conversation surrounding conventional means of conducting plant science research and ways in which inequities among historically marginalized populations have been exacerbated by academic research methodologies. Another change to this assignment was that prior to doing literature reviews for the topics assigned, students were asked to locate and review a paper that contributed to the field of plant science research that was written by an author with whom the student relates through culture, gender, religion, or other traits that form their sense of identity. 2. Personal Plant Project – a new assignment was added that carries equal point value to the Field Trial Research Paper assignment which is designed to offer students the opportunity to engage with plant science through a different lens. The assignment description is: - Select a plant of personal interest and/or a plant of cultural significance - Create a demonstration project of your choice to share with the class the following information about your plant: - common and Latin names - plant family and 3 related plants in the same family - history of the plant, cultivation, wild relative origins - human uses - ecological role - other notable facts or stories - significance of the plant to you personally - The project can be a cooked dish, photography, art, medicine, an item made from plant fiber, or anything that will help you demonstrate the meaning the plant holds for you. You may create an item, a presentation, a paper, etc. to be shared with the class.	The changes to the Field Trial Research Paper and the addition of the Personal Plant Project both offer the opportunity for all cultures and learning styles to adapt the material to suit their interests, positionalities, and ways of learning/knowing.
RESOURCES USED and where to find more information:			
Activities	Laboratory activities and student farm experiential learning activities have	A new two-step activity was added to give students the opportunity to explore plants through an Indigenous lens, opening dialogue regarding cultural and historic uses of plants from all	The addition of these activities offer the opportunity for

CULTURALLY RESPONSIVE CURRICULUM MODIFICATIONS

	always been a large component of this class.	around the world and in every culture. During the week in which we cover the role of higher plants in the living world, two new activities were required: 1. Watch the video “Holistic Healing with the Syuxtun Collective” – a Tending Nature PBS documentary on Indigenous use of plants for medicine (https://www.pbs.org/video/holistic-healing-with-the-syuxtun-collective-yu1y5e/) 2. Read various selections from the “UCSC Community Herb Garden Guide: Healing Through Cultural and Ancestral Food & Medicine” (https://drive.google.com/file/d/1mvBDEm4N1v5PF6CKjvTogptIH0IujoSY/view?usp=drive_web)	students from any culture or lived experience to adapt the material to suit their interests, positionalities, and ways of learning/knowning.
RESOURCES USED and where to find more information:			
Classroom Environment	While the classroom environment I strive to create has not changed, I recognized that my story and my philosophy might be best clarified in written format.	My story and instructional philosophy have been added to the front page of all my Canvas courses as well as linked to my website. The document form of this can be found here: https://acrobat.adobe.com/id/urn:aaid:sc:us:a33ac84c-e258-4c80-9576-3800f85d479b Additionally, I added this language to the “classroom expectations” section of my syllabus: “Engage in active participation – your presence in this class is valuable! Not only will you gain more from this class through active engagement, but the rest of us will also learn and grow from hearing your perspectives, your stories, your hopes, and your questions.”	These changes are intended to create a welcoming environment for each student in their unique and special place. We acknowledge and recognize the different lived experiences of all students and the value they bring to the learning environment.
RESOURCES USED and where to find more information:			
Grading Policies	I have always accepted late work, offered options to retake or redo quizzes and assignments that fell short of full credit, and provided multiple ways to earn points so that the grades are not based solely on one type of assessment.	I updated the language of my attendance policy to reflect my acknowledgment of cultural, familial, and personal diversity within the student population: “This class covers a lot of material each week so missing one class means you will miss an entire topic. Attendance and participation are important for mastery of the course topics. However, I understand that life circumstances can prevent students from being able to attend every class. Although you are not required to provide me with the reason for your absence, as it may be personal in nature, please do communicate with me acknowledging that you will be or have been absent and we will work together to establish make up work. I honor and respect the need for you to miss class on occasion due to religious observances, cultural events, work commitments, family obligations, and care for your physical and/or mental health and wellness. I encourage you to communicate with me regarding absences so that we can work together to accommodate your needs. If you miss three or more classes without communicating with me, you may be dropped from the class. I will make every attempt to reach out to you if your attendance is of concern, but please communicate with me if you are not able to attend class.	This change is designed to honor the many unique cultures, religions, emotions, experiences, and identities of students and open a dialogue to acknowledge the critical importance of these individual characteristics in the learning environment.
RESOURCES USED and where to find more information:			
Learning Goals	Course Objectives and Student Learning Outcomes remain unchanged.	n/a	n/a
RESOURCES USED and where to find more information:			

***Things to keep at the forefront of your mind while modifying curriculum to be culturally responsive and humanizing:

- Seek-out, recognize, and address bias within the curriculum components.
- Highlight representations from the cultures that reflect the students we serve.

CULTURALLY RESPONSIVE CURRICULUM MODIFICATIONS

- | |
|---|
| • Seek insights from students to assist in the designing of curriculum and accuracy of portrayals. |
| • Bring real-world and community issues into the curriculum and seek ideas from students regarding actions. |
| • Highlight power dynamics, privilege, and historical oppression. |
| • Utilize multiple perspectives from different cultural groups. |
| • Seek to reach multiple learning styles / intelligences. |