



Growing food for health and profit

Syllabus: ANR 111N

Agroecology and Tohono O'odham Crop Production

Course Information	
<p>Course Prefix/Number: ANR 111N Semester: Spring 2020</p> <p>Note: This course qualifies for a lab-loaded science elective and a writing intensive course. For the final project, students will be able to choose from several options:</p> <ol style="list-style-type: none"> 1) Produce a how-to article on an aspect of traditional Tohono O'odham agriculture or related topic relevant to the Nation. 2) Develop a plan for teaching gardening to children. 3) Develop a business plan for growing and selling home-grown crops. <p>In all cases, the instructor will provide one-on-one assistance as needed for the final project.</p>	<p>Credit Hours: 4 credits</p> <p>Course Title: Agroecology and Tohono O'odham Crop Production</p> <p>Class Days/Times: 9 AM – 5 PM on Alternate Saturdays (See page 7 of syllabus for dates)</p> <p>Location: Student Learning Farm and GED classroom on West Campus</p> <p>TOCC shuttle can provide transportation from the main or central campus to the West campus.</p>

<p>Instructor Information</p> <p>Dr. Melanie Lenart has a Ph.D. in Natural Resources and the Environment in the College of Agriculture and Life Sciences. As a scientist, she applies her understanding of natural ecosystems, permaculture and water harvesting to efforts to grow, process and market products involving sustainable agriculture. As a writer, her recent publications include <i>Edible Trees and Climate</i> (2017) and (with others) a 2017 <i>Growing Edible Arizona Forests: An Illustrated Guide</i>.</p> <p>Mr. Clifford Pablo joined TOCC in 2008 as the college's Student Learning Farm Manager and Extension agent. He has a lifetime of experience in modern and traditional agriculture and natural desert resources. In 1971, he helped found the San Xavier Coop Farm, located in the area he grew up farming with his grandfather in the village of Wa:k (San Xavier). He focuses on growing traditional crops using sustainable approaches.</p> <p>Ms. Joyce Miguel, a graduate of TOCC who assists Clifford, became interested in agriculture while taking this class in 2016.</p>	<p>Primary instructor : Dr. Melanie Lenart E-mail: melenart@tocc.edu Phone/Voice Mail: 520-465-6877 (mobile) Office Phone : 520-383-0071</p> <p>Farm instructor : Mr. Clifford Pablo Email: cfpablo@tocc.edu Phone: 520-993-0314</p> <p>Office location (Dr. Lenart): Room 101 in the Ha Mascadam Ha-Ki, on the main campus.</p> <p>Office location (Mr. Pablo): Mural building of the West campus.</p> <p>Office hours: From 2:30 to 4:30 PM on Thursdays in my office, and by appointment.</p>
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Important Phone Numbers

For short questions concerning subject matter or to schedule an appointment: 520-465-6877.
For general information about Tohono O'odham Community College: 383-8401.

Course Description

This course combines classroom and fieldwork to learn about traditional and commercial vegetable and grain crop production. Topics includes Tohono O'odham agricultural history, crop, soil, pest, nutrient, and weed management, cover cropping, composting, seeding, transplanting, irrigation, harvesting, and marketing. Organic production is emphasized since traditional Tohono O'odham agriculture has always been organic, and does not use synthetic fertilizers and pesticides. The lab portion of class is three hours of hands-on learning at the TOCC *oidag* (field) at TOCC's West Campus, now known as Wişag Koş Maşcamakuđ.

After completion of the course students will be able to ...

1. Plan a garden for planting at different times of the year.
2. Prepare seedling mixes, sow seeds and transplant seedlings.
3. Understand how agriculture fits into the ecology of the surrounding landscape.
4. Document field activities by writing short passages and reflection papers.
5. Prepare compost for use as a natural fertilizer.
6. Understand the key nutrients needs of plants, including wild plants as well as crops.
7. Improve plant health and growth by removing weeds.
8. Improve plant health and growth by recognizing pests and treating for them.
9. Understand the role of climate in plant success.
10. Understand the role of soil in plant survival and growth.
11. Improve growth conditions using irrigation and water harvesting.
12. Understand the cultural underpinnings of agriculture in the world and in the Tohono O'odham traditions.
13. Be able to describe activities in a way that can serve as a personal reference.
14. Be able to research and write information in a "fact sheet" manner suitable for informing others.

Course Structure

Class will meet in the GED classroom on West campus, now known as Wişag Koş Maşcamakuđ. Many of the labs will be carried out in the Student Learning Farm on the same campus. In general, each week will cover a different topic. Students will generally cover two labs as described in the Laboratory Handbook each student receives from TOCC, with additional activities to be held in the classroom. Lunch will be provided in the classroom, and lunchtime will be a time to cover additional material and for discussion.

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Course Assessment

Students will be evaluated based on the system in the table below. Assessment feedback will be provided informally on an ongoing basis, and formally in response to written exercises. Students will have an opportunity to share feedback on their course experience through an anonymous mid-course survey and final course evaluation.

Texts and Materials

Required Textbook: “Month-By-Month Gardening in the Deserts of Arizona: What to Do Each Month to Have a Beautiful Garden All Year,” by Mary Irish. ISBN-978-1591863458. Other supplemental materials will be provided in class or via the internet.

Evaluation:	Points:	Percent of Total Points:
Participation and Attendance in Farming/Gardening Practice activities and classroom sessions.	650 points (10 points each hour)	65%
Quizzes/Homework/Reflection papers. Quizzes, exams and homework will focus on material covered in class, as integrated with field work and lessons. Reflection papers will relate to readings and activities.	200 points (Points vary.)	20%
Final Project Options are: 1) Produce a how-to article on an aspect of traditional Tohono O’odham agriculture or a related topic relevant to the Nation. 2) Develop a plan for a garden that features teaching gardening to children. 3) Develop a business plan for growing and selling home-grown crops.	150 points (100 points for written portion, 50 points for presentation)	15%
Total	1,000 points	100%

Himdag Cultural Component

Tohono O’odham traditions and cultural beliefs will be discussed as relevant course topics, and only as appropriate to the Tohono O’odham Nation’s traditional standards for sharing information as determined by the Himdag Committee.

Policies and expectations / Course Policies Requirements

- 1) Attend class regularly, arriving on time – particularly on days involving work at the Student Learning Farm on the West campus.
- 2) Complete in-class and out-of-class assignments, including laboratories, and submit to the instructor in a timely fashion. Points will be lost for handing in materials late.
- 3) Do assignments and attend any required outings.
- 4) Complete final class project.

Attendance

This course is very hands-on, and much of your learning will be done in class and laboratories. Participation and Attendance counts for 60 percent of the grade, with points given for attending and/or for handing in the work done in class or labs. As a result, students can receive close to a passing grade just by attending classes consistently, or doing the online work as the case may be. Missing sessions will quickly translate into poor grades, however. Also, students can earn an A in the course only if they finish their final projects.

*You are expected to arrive to class on time and be prepared to participate in each class period. Four unexcused absences may result in withdrawal and a "W" or "Y" will be recorded. **You may request to be excused from class for religious observances and practices, for illness, for school or work-related travel or for personal or family emergency.** If you will be absent, please notify the instructor as soon as possible (approved by Faculty Senate April 2014).*

Excused absences will not count against students, but students will not receive points for missing session unless they make arrangements with the instructor and hand in any in-class exercises and assignments undertaken. If you will be absent or have been absent, please notify Dr. Lenart as soon as possible (milenart@tocc.edu or 520-465-6877). Text messages are fine, as long as the student includes his or her name in the text message. Unless the nature of the emergency precludes it, students should inform the instructor of absences BEFORE they occur.

If you miss all or a portion of a class, then you are solely responsible for obtaining missed class material from the instructor or fellow students. In some cases, missed assignments can be made up, but it up to the student to inquire about whether this is possible for any classes they miss. Points may be lost for handing in assignments late, and individual assignments will only be accepted up to the time they are handed back or covered in class.

You are expected to arrive to class on time and actively participate during each class period. Transportation to a different location and class activities often begin at the start of class and may be missed if you do not arrive to class on time. In some cases, you may have time in class to work on assignments. Consecutive, unexcused absences may result in an administrative withdrawal. Please let the instructor know if you need to miss class for any reason.

Make-up policy

Late assignments that can be made up will be accepted at the discretion of the instructor. Laboratories cannot be made up except in the case of college closure. At the instructor's discretion, extra credit opportunities and optional activities may be provided.

Academic Integrity

Violations of scholastic ethics are considered serious offenses by Tohono O'odham Community College, the Student Services Department, and by your instructor. Students may consult the TOCC Student Handbook sections on student code of

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conduct, on scholastic ethics and on the grade appeal procedure. Copies are available at Tohono O'odham Community College.

All work done for this class must be your own, or the original work of your group. While you may discuss assignments with other class members, the final written project must clearly be original. You may use work from books and other materials if it is properly cited. Copying from a book without proper reference or from a person under any circumstances will result in an "F" for the assignment, and at the instructor's discretion, possibly an "F" for the course.

ADA Compliance

Tohono O'odham Community College strives to comply with the provisions of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. If you have a learning problem, physical disability, or medical illness that requires you to have any special arrangements, please inform your instructor at the beginning of the semester so your academic performance will not suffer because of the disability or handicap.

Classroom Behavior

- Because of insurance limitations, non-registered visitors are not allowed at class sessions or on field trips.
- Possession of drugs, alcohol or firearms on college property is illegal.
- Food and beverages are allowed in classrooms.
- Pets, pagers and other electronic devices that distract students are NOT allowed in classrooms.
- Telephones should be turned off during class, unless the instructor is allowing students to use their tools (calculator, internet access).
- Students creating disturbances that interfere with the conduct of the class or the learning of others will be asked to leave.

Course Feedback

All assignments will be graded and returned to the students promptly, typically within a week after the assignment is closed for handing in. E-mail and phone messages will be returned within two days. A student or the instructor may request a student conference at any time during the semester. Quarterly grade reports will be provided to each student, either in person, by email or via the electronic system of Canvas.

Instructor Withdrawals

Students who have missed four consecutive classes or who have not submitted any assignments by the 45th day census report due on Feb. 27, 2019, are assumed NOT to be participating in the class and will be withdrawn.

Student Withdrawals

Students may withdraw from class at any time during the first two-thirds of the semester without instructor permission and without incurring any grade penalty. However, there may be financial repercussions if you are receiving financial aid. Please be sure to withdraw yourself by March 30, 2020, if you do not expect to complete the class; otherwise you may receive an "F" grade.

Incomplete (I) Grade

"I" grades are not awarded automatically. The student must request an "I" from the instructor, who can choose to award an Incomplete only if all three of the following conditions are met:

- 1) The student must be in compliance with the attendance policy.
- 2) The student must have unavoidable circumstances that would prohibit the student from completing the course.
- 3) The student must have completed over 75% of the course requirements with at least a "C" grade.

Incompletes are not a substitute for incomplete work due to frequent absences or poor academic performance. Incomplete grades that are not made up by the end of the ninth week of the following semester will be automatically changed to an F if the agreed-upon work, as stipulated on the written form signed by the instructor and the students when the "I" grade is awarded, is not completed.

Special Withdrawal (Y) Grade

The "Y" grade is an administrative withdrawal given at the instructor's option when no other grade is deemed appropriate. Your instructor must file a form stating the specific rationale for awarding this grade. "Y" grades are discouraged since they often affect students negatively. Your instructor will not award a "Y" grade without a strong reason.

Equal Access Statement/Disability Accommodations

Tohono O'odham Community College seeks to provide reasonable accommodations for qualified individuals with disabilities. The College will comply with all applicable regulations, and guidelines with respect to providing reasonable accommodations as required to ensure an equal educational opportunity. This process includes self-identifying as a student with a disability, providing supporting documentation of their disability, and being approved for services through the Disability Resources Office (DRO).

It is the student's responsibility to make known to their instructor(s) the student's specific needs within the context of each class in order to receive appropriate accommodations. We will work together in order to develop an accommodation plan specifically designed to meet the individual student's requirements.

For more information or to request academic accommodations, please contact: Anthony Osborn, TOCC Disabilities Resource Coordinator, aosborn@tocc.edu, or 520-383-0033 for additional information and assistance.

Title IX

Tohono O'odham Community College encourages each student to have the knowledge and skills to be an active bystander who intervenes when anyone is observed or being harassed or endangered by sexual violence. Sexual discrimination and sexual violence can undermine students' academic success and quality of life on campus and beyond. We encourage students who have experienced or witnessed any form of sexual misconduct to talk about their experience and seek the support they need.

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Confidential support and academic advocacy can be found with: Student Services Title IX Coordinator/Counselor, Alberta Espinoza, M.Ed. located in I-We:mta Ki: Room 18. Phone 520-383-0033 email: aespinoza@tocc.edu

Conduct: Bias, Bullying, Discrimination and Harassment
 Tohono O’odham Community College faculty and staff are dedicated to creating a safe and supportive campus environment as a core value. Harassment based on age, class, color, culture, disability and ability, ethnicity, gender, gender identity and expression, immigration status, marital status, political ideology, race, religion/spirituality, sex, sexual orientation, and tribal sovereign status will not be tolerated.

Course Outline: See handouts regarding the outline for the latest version and more details.

Week	Date	Labs to be covered	Lab book page numbers
Intro	Jan. 11	Tour of farm	--
1	Jan. 25	Seedling mixes & sowing seeds	2
		Season Extension	47
2	Feb. 8	Irrigation	27
		Direct seeding	6
3	Feb. 22	Compost	9
		Traditional Plants (Vocabulary, seasons)	Handouts
4	March 7	Weather and Climate	30
		Edible “weeds” and weed control	13
5	March 21	Soil prep, review of setting up irrigation	24, 27
		Seedling development & transplanting	24
Note: March 30 is the last day to change the course to “audit” if you’re concerned about your grade.			
6	April 6	Garden plan	20
		Crop rotation	41
7	April 18	Integrated Pest Management (IPM)	16
		If timing is right, cholla bud harvest	--
8	May 2	Either field trips or Produce Safety Training	--
Final	May 9	Produce Safety Training	Handouts

DISCLAIMER: This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur. In particular, the activities described in the outline are subject to reorganization depending on weather and other factors.