

TOHONO O'ODHAM COMMUNITY COLLEGE
SPRING 2016



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 2019</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: 3 PM – 5:45 PM Tuesdays and Thursdays</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 articles, books, <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</p> <p>E-mail: mlenart@tocc.edu</p> <p>Phone/Voice Mail: 520-465-6877 (mobile)</p> <p>Office Phone : 520-383-0071</p> <p>Farm instructor : Mr. Clifford Pablo</p> <p>Email: cfpablo@tocc.edu</p> <p>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: Before class (at 2 p.m.) in the classroom, and in my office by appointment.</p>

TOHONO O'ODHAM COMMUNITY COLLEGE

SPRING 2016

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 Science Lab on main campus. About half the meeting days will involve travel to the West Campus Student Learning Farm for hands-on work. Additional lab work may occur in the Science Lab, along with lectures and exercises. Travel to and from the West Campus can also offer an opportunity for interaction. In general, each week will cover a different topic.

TOHONO O'ODHAM COMMUNITY COLLEGE

SPRING 2016

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 weekly Farming/Gardening Practice (and any exercises held during this time).	300 points (20 points each session, 15 sessions)	30%
Participation and Attendance in weekly Agroecology classroom sessions, including completing and handing in related assignments. If assignments are online, P&A will relate to handing in assignments.	300 points (20 points each session, 15 sessions)	30%
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.	275 points (Points vary.)	27.5%
Final Project Options are: 1) Produce two how-to articles on aspect of traditional Tohono O'odham agriculture or 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. In all cases, the instructor will provide one-on-one assistance as needed for the final project.	125 points (75 points for written portion, 50 points for presentation)	12.5%
Total	1,000 points	100%

Himdag Cultural Component

Cultural components include: learning some O'odham words for relevant plants; learning about the history of traditional agriculture from written accounts and firsthand

TOHONO O'ODHAM COMMUNITY COLLEGE

SPRING 2016

from practitioners and elders; and gaining a greater understanding of agricultural opportunities on the Tohono O'odham Nation. In addition to working with crops, using irrigation and water harvesting techniques, students are expected to participate in at least one harvest of traditional food gleaned from the landscape.

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.

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.

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

TOHONO O'ODHAM COMMUNITY COLLEGE

SPRING 2016

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.

Four consecutive, unexcused absences may result in an administrative withdrawal.

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 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

TOHONO O'ODHAM COMMUNITY COLLEGE

SPRING 2016

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. 28, 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 29, 2019, 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 Incomplete ("I") from the instructor who will judge the student's ability to complete the course on his or her own. To be eligible for an incomplete, the student must have completed at least 75% of the course requirements with at least a "C" grade and have had an emergency situation that warrants the need for an incomplete. Incompletes will need to be completed within the first nine weeks from the start of the next semester.

An "I" requires a written contract between the student and the instructor listing work to be completed as well as how and when the work will be done. If the work is not completed within the contract period, the "I" grade automatically reverts to an "F." "I" grades will not be re-evaluated during the final two weeks of the semester when class activities are normally at their most intense. The practice of taking an incomplete is not recommended, because in most cases an "incomplete" will become an "F."

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.

Final Grades

Students will receive a grade transcript from the college mailed to the address given with registration materials at the end of the semester when all grades have been recorded.

SPECIAL NOTE TO STUDENT:

For privacy and security reasons, instructors are advised **NOT** to give grades over the telephone. Grades will be emailed with written permission from the student. Your instructor will make every attempt to follow the above procedures and schedules, but they may be changed in the event of extenuating circumstances. The outline is only

TOHONO O'ODHAM COMMUNITY COLLEGE

SPRING 2016

tentative, but the topics mentioned will all be covered at some point during the semester.

Students submitting assignments through the mail or by email are advised to make copies for their own protection. If you move during the semester, please file a change of address form with the Student Services Office, and inform your instructor.

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

Week	Activities
1	Introduction / Field and farm orientation
2	Intro to Agroecology, Soil / Lab: Making potting soil, seedling mixes
3	Agricultural roots / Direct seeding
4	Soil and compost / Lab: Making compost
5	Crop families / Lab: Weeds and Weed Control
6	O'odham crop vocabulary, traditions / Lab: Integrated Pest Management
7	Transplanting
8	Plant water demand / Irrigation
Spring Break (March 11-15)	
9	Weather and Climate
10	Garden Planning
11	Projects / Cholla bud harvest
12	Plant nutrient demands / Crop rotation
13	Water harvesting & permaculture / Season extension
14	Cool season vs. warm season plants / Field trip: Native Seeds SEARCH in Tucson (Tentative)
15	Field Trip to San Xavier Cooperative Farm (tentative)
16	Final Project Presentations

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.