

## **ETHNOBOTANY**

**4 Credits**  
**BIO 411 – C**  
**Spring 2022**

**Professor:** Dr. Irene Ane Anyangwe

**Office:** Room 108, Wet Lab

**Office Hours:** Mondays: 09.00AM. -10.00 PM.

**Class Location:** WETLAB 109.

**Class Meeting time:** NW: 11.00AM-12.20PM

**E-mail:**

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**Office Phone:** 505-387-7460

**Lab:T:** 03..30 AM – 04.50 PM

***Ethnobotany (BIO411-1C) course will be offered as an In-Person class. Lectures will hold on Mondays and Wednesdays, and labs on Mondays. All labs, Quizzes and Finals. shall be in Person.***

### **Required Materials:**

#### **Textbook:**

Gary J Martin. ETHNOBOTANY: A METHODS MANUAL. Conservation series. ISBN: 978-1-84407-084-8

#### **Laboratory Manual:**

Daniel E. Moerman. Native American Ethnobotany, Timber Press Portland, Oregon 13<sup>th</sup> Edition. ISBN-13:978-0-88192-453-4.

**Tools:** Pencils for Lab Exercises.

**Lab Fee:** \$125.00

### **Mission, Vision, and Philosophy**

**Mission:** Navajo Technical University honors Diné culture and language, while educating for the future.

**Vision:** Navajo Technical University provides an excellent educational experience in a supportive, culturally diverse environment, enabling all community members to grow intellectually, culturally, and economically.

**Philosophy:** Through the teachings of Nitsáhákees (thinking), Nahátá (planning), Íina (implementing), and Siihasin (reflection), students acquire quality education in diverse fields, while preserving cultural values and gaining economic opportunities.

**Course Description:** This is a four (4) credit hour course designed to provide basic information in biology for non-Biology majors. The course teaches biology principles that are valuable to non-scientists in the modern world. Topics include basic facts of life and genetic basis of behavior of living organisms, and their interactions with the environment and ecosystem. Health perspectives of the various concepts as they apply to humans will be discussed.

**Course Description:** This is a four (4) credit hour course designed to provide a strong foundation for understanding the People and plants. This course teaches ethnobotany as the study of the classification, use and management of plants by People and will draw on a range of disciplines, including natural and social sciences, to show how conservation of plants and of local knowledge about them can be achieved. It will also demonstrate how ethnobotany is critical to the growing importance of developing new crops and products such as drugs from traditional plants. The course will establish the basic to the field, showing botany, anthropology, ecology, economics and linguistics are all employed in the techniques and methods involved. It will explain data collection and hypothesis testing and will provide practical ideas on field work ethics and the application of results to conservation and community development.

**Course Objectives:** After successfully completing of this course, students should be able to avail themselves with the knowledge of all the extraordinary compilation of the plants used by especially by North American native People for medicine, food, fiber, dye and a host of other things.

COURSE OUTCOMES	COURSE MEASUREMENTS
Understand the classification, use and management of plants by People including the Navajo	Knowledge of scientific methods will be measured by class test and quizzes, and by laboratory exercises.

To understand how conservation of plants and of local knowledge about them can be achieved.	Course evaluation concept questions, analysis of assignments to test conceptual understanding assays, field survey and oral presentation.
Make a collection of local native American plants and their uses	Local plants will be known through field surveys, oral presentations and quizzes and assignments
Understand the economic benefits of native American plants	Course evaluation concepts through administered questionnaire to the community, data analysis, Assignments, presentations to test understanding.
Understand the conservation of native American plants	Field survey reports, oral presentations and quizzes and assignments to test understanding

Week	Date	Chapters	Assignment	Quiz
1	01/18-01/21	1: Data collection and hypothesis testing	Read Pp1-25	
2	01/24-01/28	2: Botany <b>Assignments</b>	Read Pp. 26-65	Assignment: Chpt 1&2
	<b>02/01</b>	<b>QUIZZE</b>	<b>CHAPTER 1 &amp;2</b>	
3	02/01-02/04	3: Ethnopharmacology and related Fields	Read Pp. 67-93	
4	02/07-02/11	4: Anthropology	Read Pp. 95-135	<b>ASSIGNMENT: Chapters 1,2,3,4</b>

5	02/14-02/18	5: Ecology	Read pp. 137-170	
6	<b>02/21</b>	<b>HOLIDAY- PRESIDENT'S DAY</b>		
7	02/22-02/24	6: Economics	Read pp171-200	
8	02/28-03/04	7: Linguistics	Read pp. 201-221	
9	<b>03/08</b>	<b>Mid Term Exam</b>	<b>Mid Term Exam</b>	<b>Chpts14,22,23,26,27,29,30,33,34,26,37,38,39</b>
	<b>03/14-03/18</b>	<b>SPRING BREAK</b>		
10	03/21-03/25	8: Ethnobotany, Conservation and community development	Read pp. 223-251	
11	03/28-04/01	Compilation of Navajo plants used by Native Americans for drugs.		
12	04/04-04/08	Compilation of native American plants used for food		

### Grading Plan:

90-100 = A  
80-89 = B  
70-79 = C  
60-69 = D  
0-59 = F

### Allocation of Grades

Exams 40%  
Homework/Presentations 10%  
Tests/Quizzes 25%  
Full Attendance 5%  
Lab Work 20%

13	04/18-04/22	Compilation of native American plants used for dyes		
14	04/25-04/29	Compilation of native American plants used for other purposes		
15	<b>05/02-05/06</b>	<b>REVISION</b>		
16	<b>05/10</b>	<b>FINAL EXAMS</b>	<b>Exam Date:</b>	<b>Chapters 1 to 8</b>

## Course Policies

### Grading Policy

Each student must do his or her own homework and case studies. Discussion among students on homework and cases is encouraged for clarification of assignments, technical details of using software, and structuring major steps of solutions - especially on the course's website. Students must do their own work on the homework and exam. Cheating and Plagiarism are strictly forbidden. Cheating includes but is not limited to: plagiarism, submission of work that is not the student's own, submission or use of falsified data, unauthorized

access to exam or assignment, use of unauthorized material during an exam, supplying or communicating unauthorized information for an assignment or exam. **No repeat/retake of failed tests or exams would be entertained. Failure to submit assignments on due dates would not be entertained.**

### **Participation**

Students are expected to attend and participate in all class activities- as listed above, as it is 5% of the grade. Points will be given to students who actively participate in class activities including field trips, laboratories, and ask questions of guest speakers and other presenters. **Signing the acceptance sheet attached to this syllabus would indicate your agreement to abide by these rules, and would be used against you in case of violation.**

### **Cell phone and headphone use**

Please turn cell phones off or place them on silence or vibrate mode **BEFORE** coming to class. Also, answer cell phones **OUTSIDE OF CLASS** (not in the classroom). Exercising cell phone use courtesy is appreciated by both the instructor and classmates. Headphones are to be removed before coming to class.

### **Attendance Policy**

Students are expected to regularly attend all classes for which they are registered. A percentage of the student's grade will be based on class attendance and participation. Absence from class, regardless of the reason, does not relieve the student of his/her responsibility to complete all course work by the required deadlines. Furthermore, it is the student's responsibility to obtain notes, handouts, and any other information covered when absent from class and to arrange to make up any in-class assignments or tests if permitted by the instructor. Incomplete or missing assignments will necessarily affect the student's grades. Instructors will report excessive and/or unexplained absences to the academic counselor for investigation and potential intervention. Instructors will drop students from the class after 3 absences unless prior arrangements are made with the instructor to make up work and the instructor deems any excuse acceptable. **Unexcused absence from any test/exam without prior permission from the professor will not be entertained, and would fetch a grade of F.**

### **Academic Integrity**

Integrity (honesty) is expected of every student in all academic work. The guiding principle of academic integrity is that a student's submitted work must be the student's own. Students who engage in academic dishonesty diminish their education and bring discredit to the college community. Avoid situations likely to compromise academic integrity such as: cheating, facilitating academic dishonesty, and plagiarism; modifying academic work to obtain additional credit in the same class unless approved in advance by the instructor, failure to observe rules of academic integrity established by the instructor.

### **Diné Philosophy of Education**

The Diné Philosophy of Education (DPE) is incorporated into every class for students to become aware of and to understand the significance of the four Diné philosophical elements, including its affiliation with the four directions, four sacred mountains, the four set of thought processes and so forth: Nitsáhákees, Nahát'á, Íina and Siih Hasin which are essential and relevant to self-identity, respect and wisdom to achieve career goals successfully.

### **Students with Disabilities**

The Navajo Technical University and the Biology program are committed to serving all enrolled students in a non-discriminatory and accommodating manner. Any student who feels he/she may need an accommodation based on the impact of disability, or needs special accommodations should inform the instructor privately of such so that accommodations arrangement can be made. Students who need an accommodation should also contact the Special Needs Counselor, Malcolm McKerry, whose phone number is 505-786-4138.

### **Helping Students Learn:**

1. Read the assigned text before and after classes
2. Take class notes in paraphrased formats, then recopy and revise these notes after classes.
3. Prepare adequately for the labs beforehand and develop an effective plan for carrying out laboratory exercises.
4. Join small study group (between 3-5 students) to accomplish homework problem sets. Try the homework on your own and then meet periodically with study group members to review them. Attempt and complete all assigned work and turn them in timely. Grades will be subtracted from late submission of homework.
5. If necessary, contact me during the above stated office hours:
6. Do not procrastinate, and so complete all work as when due to recall freshly the studied material.
7. Set enough time aside in your daily schedule for this class and the preparation required. Sessions should be short and intense to keep your focus.
8. Study session: 1 hour via stem lab students.
9. **When you finish reading a passage, close the book and write what you remember- in your own words.**
10. For a 1 credit course, the length of time you should spend studying for that course is twice the credit hours. Thus, you need to study for at least 2 hours per week in order to do well in that course. Thus, for a **4 credit course**, you need to study for about twice the number of credit hours, i.e. **8 hours per week for good results.**