Navajo Technical University http://navajotech.edu

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Course Title: Introduction to Sustainability Studies
Course #: SUST 1134L

Credit Hours: 4
Semester: Spring 2022
Cap: 10

Faculty: Abhishek RoyChowdhury, Ph.D. **E-mail**: aroychowdhury@navajotech.edu
Office: Tech 301 **Office Phone**: 505-387-7434
Office Hours: M & W 11am – 12:30pm (or by appointment)
Preferred Communication: Email
Modality (face-to-face, hybrid, or online): Face-to-face
Class Location: Face-to-face: Tech 301
Class Meeting Times: Tuesday 12:30 pm – 4:30 pm; Additionally, special classes will be assigned for extra class hours.

Required Materials:

Textbooks: **An Integrated Approach to Environmental Management**. Sarkar, Datta, Mukherjee, Hannigan (Required). Wiley. ISBN: 978-1-118-74435-2.

Energy, Environment, and Sustainability, 1st Edition. Saeed Moaveni (Optional). ISBN: 978-1-133-10509-1

Reading Materials: Will be provided by the instructor
Lab Fee (if applicable): $125.00

Mission Statement
Navajo Technical University's mission is to provide University readiness programs, certificates, associate, baccalaureate, and graduate degrees. Students, faculty, and staff will provide value to the Diné community through research, community engagement, service learning, and activities designed to foster cultural and environmental preservation and sustainable economic development. The University is committed to a high quality, student-oriented, hands-on-learning environment based on the Diné cultural principles: *Nitsáhákees, Nahátá, Īína, Siihasin.*

Course Description

This course provides a broad survey of various aspects of sustainability. Students will explore topics such as climate change, renewable energy, water, agriculture, green building, socially responsible business, environmental justice, smart growth and alternative progress indicators. Students will examine both contemporary challenges to sustainable development and examples of successful sustainability initiatives

on local, national, and global levels.

Course Outcomes	Course Measurements
At the end of the course, students will be able to:	Complete reading assignments, writing assignments, review assignments, presentation, labs, exams, and quizzes.
1. Explain the concept of sustainability using the "P"s: People, Planet, and Profit.	
2. Describe examples of successful sustainability initiatives.	
3. Identify current environmental, social, and economic issues.	
4. Propose sustainable solutions to current problems by analyzing issues, recognizing multiple stakeholders, and evaluating likely outcomes.	
5. Apply course concepts and promote sustainability in the community.	
6. Understand and explain the importance of sustainable practices.	
7. Demonstrate an understanding of the scientific aspects of sustainability practices and issues.	

Course Activities

Week	Date	Lecture Topic	Assignment	Lab
1		Introduction of Environmental Management and Sustainability; Syllabus discussion		No Lab
		Last day to add/drop		
2		Sustainability from Geology perspective	Read: Textbook Chapter 1	Geology Lab
3		Sustainability from Soil Science perspective	Read: Textbook Chapter 3	Soil Lab
4		Case Studies (Applications of Geology and Soil Science in Sustainability and Environmental Management)	Student Presentations	Quiz
5		Sustainability from Biology perspective	Read: Textbook Chapter 2	Biology Lab
6		Sustainability from Engineering perspective	Read: Textbook Chapter 6	Engineering Lab
		Graduation Petition is due		
7		Case Studies (Applications of Biology and Engineering in Sustainability and Environmental Management	Student Presentations	Quiz

8		Green Marketing and Sustainability and Environmental Management	Read: Textbook Chapter 9	Green Marketing Lab
9		**Midterm**	**Midterm**	**Midterm**
		Midterm grades are due		
10		Spring Break		No Class
11		Sustainability from Economics perspective	Read: Textbook Chapter 12	Economics Lab
		Last day to withdraw with a "W"		
12		Case Studies (Applications of Green Marketing and Economics in Sustainability and Environmental Management)	Student Presentations	Quiz
13		Life Cycle Analysis as a tool in Sustainability and Environmental Management	Read: Textbook Chapter 19	LCA Lab
14		Human Health Risk Assessment as a tool in Sustainability and Environmental Management	Read: Textbook Chapter 21	HRA Lab
15		Case Studies (Use of LCA and HHRA in Sustainability and Environmental Management)	Student Presentations	Quiz
16		Environmental Law and Policy	Read: Textbook Chapter 13	Law and Policy Lab
17		Final Exam		**Finals**
		Grades are due to the Registrar		
		Graduation		

Grading Plan

Quizzes	20%
Class Presentation	20%
Homework Assignment	20%
Final Exam	30%
Class Participation	10%

A = 100 - 90%
B = 89 - 80%
C = 79 - 70%
D = 69 - 60%
F < 60%

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 Web site. 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.

Participation

Students are expected to attend and participate in all class activities- as listed above, as it **is 10% 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.

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 Counseling Department for investigation and potential intervention. **Instructors may drop students from the class after three (3) absences unless prior arrangements are made with the instructor to make up work and the instructor deems any excuse acceptable.**

Study Time Outside of Class for Face-to-Face Courses
For every credit hour spent in a class, a student is expected to spend two hours (2) outside of class studying the course materials.

Study Time for Hybrid or Blended Courses
For a hybrid or blended course of one (1) credit hour, a student is expected to spend three (3) hours per week studying the course materials.

Study Time for Online Courses
For an online course of one (1) credit hour, a student is expected to spend four hours (4) per week studying the course materials.

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 University 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**. The use of another person's ideas or work claimed as your own without acknowledging the original source is known as plagiarism and is prohibited**.

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, Íína 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 Environmental Science and Natural Resources 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 NTU in accordance with the procedures of the subsection entitled "Students with Disabilities" under Section 7: Student Support Programs, NTU Student Handbook.

Final Exam Date: May 10, 2022