



Course Title: Technical Math
Course #: MTH 113-onl

Credit Hours: 3
Semester: spring
Cap: 15

Faculty: Shasha Han

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Office: MOD 9

Office Phone: 505-387-7381

Office Hours (face-to-face or online): online: Email anytime but will respond within 24 hours
Monday-Thursday, will respond within 48 hours Friday-Sunday

Preferred Communication (email and/or text; will respond within 24 hours): email

Modality (face-to-face, hybrid, or online): online, moodle/WebAssign

Class Location and Meeting Times (if face-to-face):

Meeting Hours and Online Hours (if hybrid):

Required Materials:

Textbook (not required)

Elementary Technical Mathematics, 12th Edition

Dale Ewen,

ISBN-: 978-1-337-63058-0

Tools: Scientific Calculator / Graphing Calculator

Laptop and Internet Access: Every student is required to own a laptop and have internet access.

Lab Fee: (access code fee)

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), Ína (implementing), and Siihasin (reflection), students acquire quality education in diverse fields, while preserving cultural values and gaining economic opportunities.

Course Description

Technical Mathematics will cover lessons pertaining to Basic Concepts, Signed numbers, Metric system, Equations & Formulas, Ratio and Proportion, Linear equations, Geometry, and Right Triangle Trigonometry. Also, the course will be integrated to other fields of study to make it real and relevant. At times, the learning process relating to the Navajo culture in the areas of Nitsahakees, Nahatah, Iina, and Sihasin will be covered.

COURSE OUTCOMES	COURSE ASSESSMENTS
Students will apply techniques and strategies in solving technical mathematics computation skills	Formative assessment, Summative assessment, Applications.
Students will solve real-world application problems that measures basic mathematics skills	
Students will use algebraic formulas to demonstrate skills in solving real-world problems	
Students will solve problems involving missing dimension(s) of geometric figures.	
Students will solve problems using trigonometric ratios.	

Connections to Program Assessment (Course-Embedded Measures)

Chapters
Chapter 1 Review of Basic Concepts 1. Operations with Whole Numbers 2. Operations with Fractions 3. Operation with Decimal, Fractions, and Percent.
Chapter 2 Signed Numbers and Powers of 10
Chapter 3 The Metric System
Chapter 5: An Introduction to Algebra
Chapter 6 :Equations and Formulas)
Chapter 7: Ratio and Proportion
Chapter 8: Graphing Linear Equations
Chapter 12: Geometry
Chapter 13: Right Triangle Trigonometry

Course Activities

Week	Date	Chapters	Assignments
1		Chapter 1	Reading/Homework Assignments
2		Chapter 1	Reading/Homework Assignments
3		Chapter 2	Reading/Homework Assignments
4		Chapter 3	Reading/Homework Assignments
5		Chapter 5	Reading/Homework Assignments
6		Chapter 6	Reading/Homework Assignments
7		Chapter 6	Reading/Homework Assignments
8		Mid term	Reading/Homework Assignments
9		Chapter 7	Reading/Homework Assignments
10		Chapter 7	Reading/Homework Assignments

11		Chapter 8	Reading/Homework Assignments
12		Chapter 8	Reading/Homework Assignments
13		Chapter 12	Reading/Homework Assignments
14		Chapter 12	Reading/Homework Assignments
15		Chapter 13	Reading/Homework Assignments
16		Chapter 13	Reading/Homework Assignments
17		Final	Reading/Homework Assignments

Spring Semester 2022

Pre-Registration Begins	Oct 25
HOLIDAY - New Year's Day	Dec 31
Faculty Return	Jan 10
New Student Orientation	Jan 13
On-Site Registration	Jan 14
HOLIDAY - Martin Luther King Day	Jan 17
Instruction Begins	Jan 18
Late Registration w/ fee	Jan 19-20
Last Day Add/ Drop Classes w/out W	Jan 21
HOLIDAY - President's Day	Feb 21
Spring Graduation Petitions due	Feb 25
Mid Term Exams	Mar 7-11
Spring Break	Mar 14-18
Last Day to Withdraw With a W	Mar 31
Final Exams	May 9-12
Final Grades due	May 12
SPRING GRADUATION	May 13
Memorial Day	May 30

Grading Plan

Homework: 100%

Class Participation:

Project(s):

Quizzes:

Mid-term:

Final Exam:

Portfolio:

A = 100-90%

B = 89-80%

C = 79-70%

D = 69-60%

F = 59% or less

Grading Policy

Students must do their own work. Cheating and plagiarism are strictly forbidden. Cheating includes (but is not limited to) plagiarism, submission of work that is not one's own, submission or use of falsified data, unauthorized access to exams or assignments, use of unauthorized material during an exam, or supplying or communicating unauthorized information for assignments or exams.

Participation

Students are expected to attend and participate in all class activities. Points will be given to students who actively participate in class activities including guest speakers, field trips, laboratories, and all other classroom events. (For online class, students are expected to log in moodle and WebAssign each week to read and do assigned work on time)

Cell phone and headphone use

Please turn cell phones off **before** coming to class. Cell phone courtesy is essential to quality classroom learning. Headphones must be removed before coming to class. (Not applied to online classes)

Attendance Policy

Students are expected to attend all class sessions. If more than ten minutes late, students will be counted as absent. 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 responsibility to complete all course work by 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.** **(For Online classes, 3 absences means 3 missing assignments)**

Study Time Outside of Class for Face-to-Face Courses

For every credit hour in class, a student is expected to spend two hours outside of class studying course materials.

Study Time for Hybrid or Blended Courses

For a hybrid or blended course of one credit hour, a student is expected to spend three hours per week studying course materials.

Study Time for Online Courses

For an online course of one credit hour, a student is expected to spend four hours per week studying 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, Íina and Siih Hasin which are essential and relevant to self-identity, respect and wisdom to achieve career goals successfully.

At NTU's Zuni Campus, the A:shiwí Philosophy of Education offers essential elements for helping students develop Indigenous and Western understandings. Yam de bena: dap haydoshna: akkya hon detsemak a:wannikwa da: hon de:tsemak a:ts'umme. *Our language and ceremonies allow our people to maintain strength and knowledge.* A:shiwí core values of hon i:yyułashik'yanna:wa (respect), hon delank'oha:willa:wa (kindness and empathy), hon i:yyayumola:wa (honesty and trustworthiness), and hon kohoł lewuna:wedyahnan, wan hon kela i:tsemanna (think critically) are central to attaining strength and knowledge. They help learners develop positive self-identity, respect, kindness, and critical thinking skills to achieve life goals successfully.

Students with Disabilities

Navajo Technical University is committed to serving all students in a non-discriminatory and accommodating manner. Any student who feels that she or he may need special accommodations should contact the Accommodations Office (<http://www.navajotech.edu/student-services#accommodations-services>) in accordance with the university's Disability Accommodations Policy (see http://www.navajotech.edu/images/about/policiesDocs/Disability_Exhibit-A_6-26-2018.pdf).

Email Address

Students are required to use NTU's email address for all communications with faculty and staff.

Final Exam Date: