Navajo Technical University　　　　　　　http://www.navajotech.edu

40 Road 6580, Kirtland, NM 87417　　　　　　Tel: (505) 609-5020

Course Title: Technical Mathematics and Lab
Course #: MTH113-8, MTH113L-8
Credit Hours: 3 (MTH113), 1 (MTH113L)
Semester: Spring 2022
Cap: 10

Faculty: Harrison Lapahie　　　　　　　　**E-mail**: hlapahie@navajotech.edu
Office: Room # 117　　　　　　　　　　　**Office Phone**: (505) 609-5018
Office Hours (face-to-face or online): Mon & Wed: 2 – 4 pm, & at Teec Nos Pos, Fri: 10 – 11 am
Preferred Communication (email and/or text; will respond within 24 hours): Email
Modality (face-to-face, hybrid, or online): Face-to-Face
Class Location and Meeting Times (if face-to-face): Rm # 117, Mon & Wed: 9 – 10:30 am

Required Materials:
Textbooks: *Elementary Technical Mathematics, 12ᵗʰ Ed.*, by D. Ewen, Publishers: Brooks/Cole Cengage Learning, ISBN: 978-1-337-63065-8, $180.00
Tools: 1) Scientific Calculator preferably TI-84 Plus CE. 2) Access to Internet and Laptop required. For students who do not have laptops, NTU IT Department will purchase a laptop and the cost of the laptop will be deducted from their Pell Grant or Scholarship.
Lab Fee (if applicable): None

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

Course Description
MTH-113: This course will cover the application of arithmetic, measurement, introduction to algebra, equations and formulas, ratio and proportion, geometry, right triangle trigonometry, Law of Sines, and basic statistics. The Navajo cultural ways of learning and knowing are integrated as well.
MTH-113L: Technical Mathematics with lab is a 1 credit hour lab. The math lab will focus on additional practice exercises on concepts and applications involving arithmetic, fraction, decimal, and percentages. The math lab will offer tutoring and online assignments. The class is aligned to Math 113 that 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.

Course Outcomes	Course Assessments
Students will learn the basic math technical skills	Homework, Chapter Tests, Midterm, Final Exam
Students will apply basic technical mathematics.	
Will learn the Algebra needed in technical/trade programs.	

Course Activities

Week	Date	Class Topics/Reading Due	Assignments Due	Assessments
1	Jan 18-21	Chap 1: Basic Concepts	Assigned HW	
	Jan 19-20	**Late Registration w/fee**		
	Jan 21	**Last day to add/drop w/out "W"**		
2	Jan 24-28	Chap 1: Basic Concepts	Assigned HW	
3	Jan 31-Feb 4	Chap 2: Signed Numbers & Powers of 10	Assigned HW	Chap 1 Test
4	Feb 7-11	Chap 2: Signed Numbers & Powers of 10	Assigned HW	
5	Feb 14-18	Chap 3: The Metric System	Assigned HW	Chap 2 Test
6	Feb 21-25	Chap 4: Measurement	Assigned HW	Chap 3 Test
	Feb 25	**Graduation Petition due**		
7	Feb 28-Mar 4	Chap 5: Polynomials: An Intro to Algebra	Assigned HW	Chap 4 Test
8	**Mar 7-11**	**Midterm**		**Midterm**
	Mar 11	**Midterm grades due**		**Midterm**
9	Mar 14-18	Chap 6: Equations and Formulas	Assigned HW	
10	Mar 21-25	Chap 7: Ratio and Proportion	Assigned HW	Chap 6 Test
11	Mar 28-Apr 1	Chap 8: Graphing Linear Equations	Assigned HW	Chap 7 Test
	Mar 31	**Last day to withdraw with "W"**		
12	Apr 4-8	Chap 9: Systems of Linear Equations	Assigned HW	Chap 8 Test
13	Apr 11-15	Chap 10: Factoring Algebraic Expressions	Assigned HW	Chap 9 Test
14	Apr 18-22	Chap 11: Quadratic Equations	Assigned HW	Chap 10 Test
15	Apr 25-29	Chap 12: Geometry	Assigned HW	Chap 11 Test
16	May 2-6	Catch up, turn in late assignments		
17	**May 9-12**	**Final Exam (Wednesday, May 11)**		**Finals**
	May 12	**Grades due to the Registrar**		
	May 13	**Fall Graduation**		

Schedule Disclaimer: The course schedule outlined in the table above is subject to adjustment depending on the needs of the class to focus more on a specific chapter

Grading Plan

Attendance: 7%	A = 100-90%
Homework: 30%	B = 89-80%
Class Participation: 3%	C = 79-70%
Tests: 20%	D = 69-60%
Mid-term: 20%	F = 59% or less
Final Exam: 20%	

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.

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.

Attendance Policy
Students are expected to attend all class sessions. 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.**

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, Íína 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**:shiwi 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:shiwi core values of hon i:yyułashik'yanna:wa (respect), hon delank'oha:willa:wa (kindness and empathy), hon i:yyayumoła:wa (honesty and trustworthiness), and hon kohoł lewuna:wediyahnan, 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#accomodations-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: Wednesday, May 11, 2022.