

Course Title:		Engineering Lab I for Math: Algebra and Trigonometry			
Course Prefix:	GNEG	Course Number:	1111	Section Number:	P01, P02, P03, P04
Department of Engineering Technology			Roy G. Perry College of Engineering		
Instructor Name:		Dr. N. N. Sarker			
Office Location:		S. R. Collins, Room 306			
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Office Hours:		MW 09:00am – 10:00 am, 11:00am-12:00noon, 01:00-03:00pm T 01:00-03:00pm			
		Walk-ins are welcome. and by appointment. In case you don't find me during my office hours, please wait for 5 minutes at most.			
Virtual Office Hours:		Contact by email			
Course Location:		S. R. Collins, Room 331			
Class Meeting Days & Times:		W	03:00-05:50 pm		
Catalog Description:		0-3) Credit 1 semester hour. Equations, Functions, Graphs, Theory of equations, Exponential and logarithmic functions, Trigonometric functions, identities and applications, and System of equations			
Prerequisites:		None			
Co-requisites:		Concurrent enrollment in MATH 1115 Algebra and Trigonometry			
Required Text:		None. However, lab handouts will be made available week before each lab.			
Recommended Text/Readings:		Algebra and Trigonometry, Ninth Edition by Ron Larson. Cengage Learning.			

Required Tools and Supplies:	Tools will be made available during each lab
Student Knowledge and Experience Assumptions:	A comfortably working experience in algebra and trigonometric functions
Access to Learning Resources:	PVAMU Library Telephone: (936) 261-1500 http://www.pvamu.edu/library/ Use the Reference Desk at the library where the staff is eager to guide your research. They can orient you to hard copies and on-line resources. University Bookstore Telephone: (936) 261-1990 https://www.bkstr.com/Home/10001-10734-1?demoKey=d The Writing Center Telephone: (936) 261-3700 http://www.pvamu.edu/lcom/home/the-writing-center/ The Writing Center's goal is to provide a friendly, stress-free environment for students from all over campus to meet with a consultant and talk about writing of all types. They provide a responsive audience and advice from experienced writers in sessions generally lasting thirty to forty-five minutes. Sessions of this length offer time to work individually with students on any aspect of the writing process: from brain storming and drafting, to revising and proofreading. They will explore ways to improve a student's overall writing skills. They do NOT proofread or edit for students, but instead teach proofreading and editing techniques. Their goal is to: make a better writer for the long term. The Tutoring Center John B. Coleman Library - Room 209 Telephone: (936) 261-1561 http://www.pvamu.edu/universitycollege/ae/cas/ Open to all undergraduate students enrolled for credit in targeted PVAMU courses. Student Academic Success Center Telephone: (936) 261-1040 https://www.pvamu.edu/compass/ Student Academic Success Center identifies academic and social roadblocks that interfere with persistence and timely graduation of PVAMU students. SASC informs campus-wide policies by staying current with retention literature and best practices. Further, SASC develops programs and services that are specifically aimed at continuing the academic success of the first year. They strive to provide PVAMU

	students with “Navigation to Graduation”
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Course Goals or Overview

At the end of this course, the students will be able to

1. manipulate simple algebraic and trigonometric functions
2. express results using charts and Microsoft Excel graphs
3. write small programs in MATLAB and C language

Standard Met: SACS

	Skills and Knowledge	Using ETAC/ABET Outcomes
1	Select and apply the knowledge of algebra and trigonometric function in problem solving	Outcome ‘b’: Ability to select and apply a knowledge of mathematics, science, engineering and technology and engineering technology problems that require the application of principles and applied procedures or methodologies
2	A commitment to quality, timeliness and continuous improvement	Outcome ‘k’: A commitment to quality, timeliness, and continuous improvements

Course Requirements and Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – written tests designed to measure knowledge of presented course materials

Labs – lab handouts will be made available at this course eCourse site prior to labs.

Grading Matrix

Instrument	Semester weight, %
Labs	50
Mid semester test	25
Final Exam	25
Total:	100

Extra Points: Based on positive attitude, civility, and class performance, a maximum of 5 points may be added to your lab and test performances. Ask your instructor about these extra points at the beginning of the semester.

Grade Determination:

A = 90 – 100pts;
 B = 80 – 89pts;
 C = 70 – 79pts;
 D = 60 – 69pts;
 F = below 60.

	Your score will be posted in the eCourse site throughout the semester. As a result, you will be able see your instantaneous grade throughout the semester. Therefore, you will have no reason to be surprised with your end of the semester grade.
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Course Procedures

Submission of Lab Reports:

Your instructor will help you complete your lab work in each class. Variations in the scores will depend on completeness and neatness of your work.

Before you leave the lab, you have to upload a scanned copy of your work to eCourse. Besides uploading to eCourse, your Instructor will select two works for submitting to TaskStream site as well.

Excused Absences

Absences due to illness, attendance at university approved activities, and family or other emergencies constitute excused absences and must be supported by documentation presented to the instructor prior to or immediately upon the student's return to class. Students are always responsible for all oral and written examinations as well as all assignments (e.g. projects, papers, reports).

Excessive Absences

Accumulation of one week of unexcused absences (for the number of clock hours equivalent to the credit for the course) constitutes excessive absenteeism. The instructor is not required to accept assignments as part of the course requirement when the student's absence is unexcused.

Source: (<http://catalog.pvamu.edu/generalacademicinformation/undergraduate/#attendancetext>)

Exam Policy

During examination periods (Mid-Semester and Final), students will place all backpacks, purses, and electronic devices other than a standard calculator in the front of the classroom and will sit at locations designated by the instructor in the classroom or lab. If any student needs to leave the exam room for any reason during the examination period, the student must submit the exam to the instructor and will not get back the exam. During exam, a student can have only the following item on the desk and close by:

- Test
- Pen or pencil
- Eraser
- One standard calculator (calculator cannot be shared)

Mid Semester Exam and Lab Work Policy

Labs and Exams should be taken as scheduled. Makeups with different assignments may be given in accordance with the Excused criteria stated in the University Handbook, such as, health, out of campus university related activities (band, sports). In every case, a note must be made available to the instructor. Makeups should be completed within 7 calendar days of missed date. It is the students' responsibility to cover any missed material during the absence.

Housekeeping:

For labs, all tools and lab supplies must be returned to their appropriate location. Please keep chairs and tables where they belong.

Please do not move, remove, swap, or replace any equipment. If you suspect any equipment to be faulty, please bring it to your instructor's attention.

Classroom Conduct

Cellular phones and other electronic devices are disruptive to the class and must be turned off or made inaudible during lecture. Any iPod / MP3 devices must be turned off during class. No texting is allowed during class. However, the instructor may ask to use them for academic enrichment purposes.

Interpersonal skills are critical to both working with peers and leading others. It is expected that you will be respectful of the opinions and property of others, be aware of and responsive to the effect of one's behavior on others. Working with others in resolving problem may be encouraged.

You are encouraged to work together on lab exercises as collaboration and teamwork are important skills to learn. Working on teams, as well as studying home together for exams are good opportunities to develop the ability to collaborate. However, **exams, quizzes, laboratory write-ups, and homework assignments are strictly the individual's responsibility and must be done independently** and any collaboration will cost you in the form of reduced score. The instructor's assessment on collaboration is final. No argument will be accepted.

Food and Beverages

Other than sealable bottles of water, **food and beverage items are prohibited in the classroom and laboratory.**

Dress Code and Professional Awareness and Development

We prepare students for the professional world of work. Business casual attire is strongly encouraged to prepare students for company internships, co-operative education programs, or for visits by industry representatives to the classrooms or labs.

During lab, students are required to wear close-toed shoes at all times. If you show up to lab in flip-flops or any open-toed footwear you will be asked to leave and you will be considered absent for that lab. Students should not wear hats in the class or in the labs.

You are now out of your parental care and you are own guardian to build your career for the rest of your life and your family and kids to come. Build skills to be respected by your peers and others. Talk gently; avoid confrontational situation, win all by you conduct, talk, and behavior. Remember your greatest enemy lives within you; win over your own anger. Anger does not help you; rather it damages your reputation and your chance to be a leader.

Professional Organizations and Journals
IEEE (www.ieee.org)
References
See eCourse web site for this course.

University Rules and Procedures

Disability statement (See Student Handbook):

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:

1. **Cheating:** deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
Note that the first occurrence of a student caught cheating on an exam in this course will receive zero points for that exam. If there is a second occurrence of cheating on an exam by a student, the student will receive a failing grade for the course.
2. **Academic misconduct:** tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. **Fabrication:** use of invented information or falsified research.
4. **Plagiarism:** unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action.

Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):

Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy:

Prairie View A&M University requires regular class attendance. Attendance and punctuality is expected and is vital to a thorough understanding of the course. The student cannot develop the proficiency required for this course just studying the textbook. Lectures and/or labs may include material not covered in the textbook. **If you cannot attend a particular class session, please discuss the conflict with the instructor in advance (in person, via phone or email).** Attendance will be taken at the beginning of class. Any student who is not present when attendance is taken may be counted as absent for that class.

Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class.

Student Academic Appeals Process

Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

Course Plan

Week	Labs/Tests
1	Introduction to lab and discussion on syllabus
2	Types of algebraic equations. Finding break-even-point from a system of two linear equations. Transferring data onto a graph
3	Study of linear and quadratic equations by varying diameter and thickness of pizza
4	Volume, height, and flowrate of some daily events
5	Quadratic equations: finding time to touch ground of a falling body
6	Quadratic equation: Prob. 96 at page 221.
7	Course review and discussion of mid semester test
8	Test 1
	Spring break
9	Trigonometry: finding the height of SR Collins Building
10	Trigonometry: Finding the volume of changing cone
11	Path of a projectile
12	Exponential growth of a system
13	Exponential growth with stabilization of a system
14	Final Examination