

Course Title: Engr. Laboratory II for Math			
Course Prefix: GNEG	Course No:1121	Section No.: P03	CRN:10188
Department of	Engineering Technology	College of	Engineering
Instructor Name:	Ravindran Iyengar		
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	P.O. Box	519	
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	Prairie View, TX 77446		
Office Hours:	TR – 9 to 11 AM, 2 PM to 3 PM W – 10 AM to Noon, 1 PM to 3 PM		
Virtual Office Hours:			
Course Location:	SRCO Rm 116		
Class Meeting Days & Times:	W – 3:00 – 5:50 PM		
Course Abbreviation and Number:	GNEG 1121		
Catalog Description:	Credit: 1 semester hour. Practical applications of the 1st level Calculus for problems in engineering, computer science, and technology. The 1st level Calculus concepts will be reinforced through hands-on, physical application in the laboratory.		
Prerequisites:	Math 1115 or equivalent		
Co-requisites:	Math 1124 Calculus with Analytic Geometry I		
Required Text:	None		
Recommended Text:	Calculus, 6 th edition, by James Stewart, Brooks Cole Publishing Company		
Access to Learning Resources:	PVAMU Library: phone: (936) 261-1500; web: http://www.pvamu.edu/pages/3585.asp University Bookstore: phone: (936) 261-1990; web: https://www.bkstr.com/Home/10001-10734-1?demoKey=d		
Course Goals or Overview:			
	The goal of this course is to 1. Focuses on familiarizing engineering with concepts learned in the Calculus with real life applications. 2. Provide hands-on experiments and/or visual demonstrations which will be used to describe mathematical applications.		
Course Objectives/Accrediting Body ABET Standards Met: SACS and ABET			
	1. Graduates will have successful careers in related fields. 2. Graduates will have the necessary preparation to enter into advanced degree programs related fields.		
At the end of this course, the student will demonstrate			
		Alignment with Academic Program	Alignment with Core Curriculum
1	Knowledge and applications of mathematics	a1 - Engineering and Comp Science b1 - Engineering Technology	020 and 090 - area one
2	Knowledge and applications of computing	a2 - Engineering and Comp Science b2 - Engineering Technology	020 and 090 - area one

Course Evaluation Methods

MAJOR TOPICS COVERED IN THE COURSE

Week	Topics in Math 1124
Week 1	Introduction to Lab: Syllabus, Course Policies and Expectations
Week 2 & 3	Geometric and Algebraic Approach to Vectors; Pulley and weight system experiment
Week 4 & 5	Ch 1 Functions and Models: Animation, Multisim & Excel experiment Ch2 Limits and rates of change: Animation 2.1 The tangent, velocity and limits problems/animation
Week 6	Exam 1
Week 7, 8	Ch3 Derivatives: Trig; Product, Quotient and Chain Rule; Animation 3.1 Derivatives, def., interpretation 3.2 3.3 Differentiation formulas, properties
Week 9	Exam 2
Week 10	Application of derivatives: Maximum and Minimum Experiments
Week 11 & 12	Application of derivatives: Optimization and Engineering Examples
Week 13	Review
Week 14	Final - Last Lab meeting.

The instructor reserves the right to adjust the syllabus according to lecture and class progress.

Based on the topics above, this course will utilize the following instruments to determine student grades and proficiency of the learning outcomes.

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

Program Assignments – assignments designed to supplement and reinforce course material

Class Participation – daily attendance and participation in class discussions

Grading Matrix

Instrument	Total
Lab Assignments	35 %
Exam(s)	25 %
Class Participation/ Discussion	10 %
Final (Last Lab session)	30 %
Total:	100 %

Grade Determination: The Grading System is located in the University's undergraduate catalog, 2008-2010, p. 119. At the discretion of the instructor, additional (optional) assignments and or makeup exam may be given for extra credit.

Letter Grades		
A	≥ 90	
B	≥ 80	< 90
C	≥ 70	< 80
D	≥ 60	< 70
F	< 60	

Course Procedures

Submission of Assignments:

All assignments are due at the beginning of the class on the date specified. Any questions or clarification regarding

the class needs to be done immediately. **DO NOT WAIT TILL THE LAST MINUTE.**

Late assignments: Given a valid reason, late homework will be accepted up to 2 days (48 hours) late. A penalty of 15% of the grade per day will be assigned on such late work. No homework will be accepted after 2 days. Late homework must be turned in to me personally.

EXAM POLICY

Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook). During the whole period of an exam, no one is allowed to leave the classroom until he or she finishes and submits the exam paper. Suspicious cheating behavior may be penalized.

NOTE: Scheduling of TESTS may change depending on the progress of the class. Additional tests may be given at the discretion of the instructor.

At the discretion of the instructor, additional (optional) assignments and or makeup exam may be given for extra credit. The instructor reserves the right to adjust the syllabus according to the progress of the class. The instructor reserves the right to change the grading matrix and/or the grading scale of individual assignments/tests/quiz/make ups based on the continuous class performance.

Rules: No hats, cell phones or other electronic devices during class lectures or exams. Taking pictures in class is prohibited.

ABSENTEES:

Absent from class is NOT an excuse for NOT being aware of the happenings in the classes missed. It is the responsibility of the student to make necessary efforts to find out what she/he missed in class and do everything necessary to pull himself/herself up to the current status before the next class.

ATTENDANCE:

Attendance is taken every day. The class participation grade will be reduced proportionate to the "tardy and cell usage" check box in the attendance sheet.

Professional Organizations and Journals

- a) ACM < www.acm.org >
- b) IEEE < www.ieee.org >

References

None

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.
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. 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.