FUNDAMENTALS OF AGRICULTURAL ENGINEERING (AGEG 1413)

Department of Agriculture, Nutrition & Human Ecology	**College of Agriculture and Human Sciences**

Instructor Name:	Dr. Eric Risch
Section # and CRN	
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Office Hours:	**MW 10:00 AM - 12:00 Noon.** Other times by appointment. Students are advised to make appointments with the professor ahead of time and be specific with the subject matter to be discussed. Students should also be prepared for their appointment by bringing all applicable materials and information to the professor.
Virtual Office Hours:	**TBA**

Course Location:	**Agri-Bus Rm 121**
Class Meeting Days & Times:	**T 2:00 – 3:20 PM; Th 2:00 – 3:50 PM**
Course Abbreviation and Number:	**AGEG 1413**
Catalog Description:	Introduction to the major areas of applying engineering principles to solving problems in agriculture. Emphasis is placed on problem solving skills, farm workshop methods, tool identification, land measurement methods and skills. Will include introduction to elementary surveying.

Prerequisites:	Working knowledge of the number system and basic mathematics.
Co-requisites:	None

Required Text:	Introduction to Agricultural Engineering Technology. 3rd Edition (- H. L. Field; and J. B. Solie.)

References:	Engineering Applications in Agriculture (- W. Bowers, B. A. Jones, Jr. and E. F. Olver.) http://en.wikipedia.org/wiki/agricultural engineering

Access to Learning Resources:	PVAMU Library: phone: (936) 261-1500; web: http://www.tamu.edu/pvamu/library/ University Bookstore: phone: (936) 261-1990; web: https://www.bkstr.com/Home/10001-10734-1?demoKey=d

Course Goals or Overview:

At the end of the course students should be able to solve problems utilizing the basic concepts of agricultural engineering in the following broad areas:

i) Basic Problem Solving Skills
ii) Elementary Surveying/ Basic Soil and Water considerations;
iii) Basic Shop Skills including Shop Safety;
iv) Farm Structures and Environment;
v) Farm Power and Machinery;
vi) Economic Aspects of Agricultural Engineering.

Course Objectives/Accrediting Body Learning Outcomes:

KR 4.2.a: Expected Learning Outcome: Students are able to apply basic problem-solving techniques to agricultural problems and issues.
KR 4.2.b: Expected Learning Outcome: Students are able to develop outcome measures, use informatics principles and technology to collect and analyze data for assessment and evaluate data to use in decision-making.
SK5.1c: Expected learning Outcome: Students are able to understand and explain principles of agricultural mechanics and farm mechanization

	Upon successful completion of this course, students will be able to:	Program Learning Outcome # Alignment		Core Curriculum Outcome Alignment
1	Have a basic knowledge of standard form of estimating answers. Basic problem solving skills.	Program Core	T, R	1,2,3
2	Understand the concepts of land measurements including surveying.	Program Core	T	1,2,3
3	Have knowledge of farm water systems.	Program Core	R	1,2,4,
4	Understand concepts of Work, Power, Horsepower and torque	Program Core	T	1,2,3,4
5	Understand Internal Combustion engines and Power applications.	Program Core	T	1,2,3
6	Have basic knowledge of Economic considerations in agricultural engineering.	Program Core	T	1,2,3,4

Code Key T = Taught
R = Reinforced
I = Integrated

Course Grading Procedures and Evaluation:

Two Tests	20 %
Pop Quizzes (Several)	10
Mid-Term Examination	20
HW Assignments	30
Final Examination	20
Total possible points	**100 %**

(Bonus: Attendance & Participation. **10** extra points!)

Grade

A	**90 – 100%**
B	**80 - 89**
C	**70 - 79**
D	**60 - 69**
F	**0 – 59**

Submission of Assignments:
Assignments are expected to be submitted on time.

Formatting Documents:
Microsoft Word is the standard word processing tool used at PVAMU. If you are using other word processors, be sure to use the "save as" tool and save the document in either the Microsoft Word, Rich-Text, or plain text format.

Exercises – written assignments designed to supplement and reinforce course material
Class Attendance – daily attendance is required and absenteeism is strongly discouraged.

VII. ATTENDANCE AND PARTICIPATION POLICY
Prairie View A&M University requires regular class attendance. Attending all classes supports full academic development of each learner whether classes are taught with the instructor physically present or via distance learning technologies such as interactive video. 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 during the semester. The university's attendance policy is provided below.

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.

Absences on Religious Holy Days
In accordance with Texas Education Code, Section 51.925, subchapter (Z), a student may be absent from classes for the observance of a religious holy day and will be permitted to take missed examinations and complete missed assignments provided the student has notified the instructor of the planned absence in writing and receipt of the notice has been acknowledged by the instructor in writing. "A religious holy day means a holy day observed by a religion whose place of worship is exempt from property taxation under the Texas Tax Code, Section 11.20."

Cell Phone use during class is **ABSOLUTELY PROHIBITED**, with **FEW EXCEPTIONS**: e.g. The Instructor may give permission for you to do a **SEARCH** for specific information during class using an approved search engine.

COURSE OUTLINE: EVENT AND LECTURE SCHEDULE

This schedule is subject to change as the semester proceeds in order to cover the most important material in the time allotted. Any revisions will be duly noted and announced in class. All referenced readings are taken from the required text, Introduction to Agricultural Engineering Technology. 3rd Edition
(- H. L. Field; and J. B. Solie.)

Week # and Class#	Date	Topics and Assignments
Week #1 Class #1	**Jan 15, 2019 [Tuesday]**	**Lecture Segment #1: Introductions:** ▪ Getting to know the instructor and class members. **The Course Syllabus:** ▪ Course objectives, assignments, university regulations and grading policies. **Assignments:** ▪ Begin reading Chapter 1.
Week #1 Class #2	**Jan 17, 2019 [Thursday]**	**Lecture Segment #2** **Assignments:** Read:
	Jan 18, 2019 [Friday]	**UNDERGRADUATE** ▪ **LATE REGISTRATION/ADD COURSES/CHANGE COURSE/CHANGE MAJOR/SCHEDULE ENDS-UNDERGRADATE** ▪ **WEB REGISTRATIONS CLOSED**
	Jan 19, 2019 [Saturday]	**GRADUATE** ▪ **LATE REGISTRATION/ADD COURSES/CHANGE COURSE/CHANGE MAJOR/SCHEDULE ENDS-UNDERGRADATE** ▪ **WEB REGISTRATIONS CLOSED**
Week	**Jan 21, 2019**	**MLK Day – University Closed**

#2	**Monday**	
Week #2 **Class #3**	**Jan 22, 2019** **[Tuesday]**	**Lecture Segment #3:** **Assignments:** ▪ Read:
Week #2 **Class #4**	**Jan 24, 2019** **[Thursday]**	**Lecture: Segment #4** **Assignments:** ▪ Read:
Week #3 **Class #5**	**Jan 29, 2019** **[Tuesday]**	**Lecture Segment #5:** **Assignments:** ▪ Read:
Week #3	**Jan 30, 2019** **[Wednesday]**	▪ **CENSUS DATE (12TH CLASS DAY): COURSE RESERVATIONS CANCELLED FOR NON-PAYMENT** ▪ **LAST DAY TO WITHDRAW FROM COURSE WITHOUT RECORD**
Week #3 **Class #6**	**Jan 31, 2019** **[Thursday]**	**Lecture Segment #6:** **Assignments:** ▪ Read: ▪ **WITHDRAWAL FROM COURSES "WITH RECORD" (W) BEGINS**
Week #4 **Class #7**	**Feb 5, 2019** **[Tuesday]**	**Lecture Segment #7:** **Assignments:** ▪ Read : To be assigned
Week #4 **Class #8**	**Feb 7, 2019** **[Thursday]**	**Lecture Segment #8:** **Assignments:** ▪ Read: To be assigned
Week #5 **Class #9**	**Feb 12, 2019** **[Tuesday]**	**Lecture Segment #9:** **EXAM #1**
Week #5 **Class #10**	**Feb 14, 2019** **[Thursday]**	**Lecture Segment #10:** **Assignments:** ▪ Read: To be assigned **EXAM #1 GRADES POSTED**
Week #6	**Feb 19, 2019**	**Lecture Segment #11:**

Class #11	**[Tuesday]**	**Assignments:** ▪ Read: To be assigned
Week #6 **Class #12**	**Feb 21, 2019** **[Thursday]**	**Lecture Segment #12:** **Assignments:** ▪ Read: To be assigned
Week #7 **Class #13**	**Feb 26, 2019** **[Tuesday]**	**Lecture Segment #13:** **Assignments:** ▪ Read: To be assigned
Week #7 **Class #14**	**Feb 28, 2019** **[Thursday]**	**Lecture Segment #14:** **Assignments:** ▪ Read: To be assigned
Week #8 **Class #15**	**Mar 5, 2019** **[Tuesday]**	**Lecture Segment #15:** **Assignments:** ▪ Read: To be assigned
Week #8 **Class #16**	**Mar 7, 2019** **[Thursday]**	**Mid-Semester Exams** ▪
	**March 6 – 8, 2019**	**MID –SEMESTER EXAMINATION PERIOD**
Week #9 **Class #17**	**March 11 – 16, 2019**	**SPRING BREAK**
Week #10 **Class #16**	**Mar 19, 2019** **[Tuesday]**	**Lecture Segment #17:** **Assignments:** ▪ Read: To be assigned
Week #10 **Class #18**	**Mar 20, 2019** **[Wednesday]** **Mar 21, 2019** **[Thursday]**	**FALL 2018 GRADUATION APPLICATIONS DEADLINE** **Assignments:** ▪ Read: To be assigned
Week #11 **Class #21**	**Mar 26, 2019** **[Tuesday]**	**Lecture Segment #21:** **Assignments:** ▪ Read:
Week #11 **Class #22**	**Mar 28, 2019** **[Thursday]**	**Lecture Segment #22:** **Assignments:** ▪ Read: To be assigned
Mar 22, 2019 **[Friday]**	**Last day to withdraw with "W"**	

		▪
Week #12 **Class #23** 	**Apr 2, 2019** **[Tuesday]**	**Lecture Segment #23:** **EXAM #2**
Week #12 **Class #24** 	**Apr 4, 2019** **[Thursday]**	**Lecture Segment #24:** **Assignments:** ▪ Read: To be assigned **EXAM #2 GRADES POSTED**
Week **#13**	**Apr 8 - 12, 2019**	**PRIORITY REGISTRATION BEGINS FOR SPRING 2019**
Week #13 **Class #25** 	**Apr 09, 2019** **[Tuesday]**	**Lecture Segment #25:** **Assignments:** ▪ Read: ▪ **PRIORITY REGISTRATION BEGINS FOR SUMMER AND FALL 2013 SEMESTERS.**
Week #13 **Class #26**	**Apr 11, 2019** **[Thursday]**	**Lecture Segment #25:** **Assignments:** ▪
Week #14 **Class #27**	**Apr 16, 2019** **[Tuesday]**	**Lecture Segment #27:** **Assignments:** ▪ Read: To be assigned
Week #14 **Class #28**	**Apr 18, 2019** **[Thursday]**	**Lecture Segment #28:** **Assignments:** ▪ Read: To be assigned
Week #15	**Apr 30, 2019**	**Last Class Day**

	**May 1 – 7, 2019**	**FINAL EXAMINATION PERIOD**
	**May 9, 2019** **[Thursday]**	**FINAL GRADES DUE FOR GRADUATING CANDIDATES**
	**May 11, 2019** **[Saturday]**	**COMMENCEMENT**
	**May 14, 2019** **[Tuesday]**	**FINAL GRADES DUE FOR ALL STUDENTS**

In order to ensure that you have read over this entire document you are required to sign the Statement of Agreement on the final page of the syllabus and return it at the start of next class period. This will be our contract that you have read over the entire syllabus and that you understand what is expected of you in this class.

STATEMENT OF AGREEMENT

I have read the Course Syllabus AGEG 1413 (Fundamentals of Agricultural Engineering) for the Spring semester 2019, including the Class Lecture and Event Schedule, and agree to abide by the conditions for the class as spelled out in this document. My signature indicates my personal commitment to meeting the course objectives and succeeding in this educational endeavor.

_____
Signature-Student

_____ _____ ___
Student name (Please print neatly) Student ID # Date

_____
Signature-Instructor

_____
Instructors name Date

RETURN THIS PAGE FROM THE SYLLABUS TO THE INSTRUCTOR TO COMPLETE YOUR ENROLLMENT IN THIS COURSE.

🗁 **RECEIVED WITH STUDENT'S SIGNATURE:** _____

☑ **ENTERED INTO GRADE BOOK**: _____