

SAM HOUSTON STATE UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
COURSE SYLLABUS

AGR 330 Section 01

AGRICULTURAL ELECTRIFICATION

3 CREDIT HOURS

SUMMER II 2008

LOCATION OF CLASS MEETING: AMC RM-101 and AMC LAB

14 DAY ARRANGED SCHEDULE STARTING

JULY 7TH

CLASS MEETING TIMES: M-F 1:00 to 1:50

LAB MEETING TIME: M-F 1:00 to 4:50

INSTRUCTOR: Joe E. Muller, Ph.D., Associate Professor – Ag Mechanization

OFFICE: Agricultural Mechanization & Technology Center, Rm 100.

CONTACT INFORMATION:

Thomason Bldg (936) 294-1218

AMC (936) 294 4877

FAX . (936) 294-3660

Home (979) 774-1503

E-mail: jemuller@shsu.edu

OFFICE HOURS: as posted or by appointment

COURSE DESCRIPTION:

Agr 330 is intended to provide the opportunity to develop an understanding of electrical theories, principles, and terminology; and to develop fundamental skills necessary in planning, installing, and maintaining electrical circuits, lighting, motors, and equipment for use in residential and agricultural production, food processing, and crop storage applications through classroom lecture, demonstrations and hands-on laboratory activities. Electrical safety will be stressed throughout the entire course.

COURSE OBJECTIVES: Upon completion of this course, the students should be able to;

- I. Define terms and definitions associated with electrical energy production and distribution systems include new alternative energy sources.
- II. Discuss and practice safe electrical use practices.
- III. Explain how electrical energy is produced and distributed through the transmission system.
- IV. Explain series and parallel circuits and calculate problem associated with each.
- V. Identify different types of electrical wiring, cables, conduit and equipment, and select appropriate types for different applications.
- VI. Plan and size service entrance conductors and equipment.
- VII. Explain the operation and purpose of overcurrent protection devices and properly install them.

- VIII. Explain the operation and purpose of ground fault circuit interrupters (GFCIs) and properly install them.
- IX. Explain the operation and purpose of arc fault circuit interrupters (AFCIs) and properly install them.
- X. Design and install branch circuits and equipment.
- XI. Discuss principles of operation of different types of electrical motors and controls and select and install them for appropriate applications
- XII. Discuss principles of operation of different types of lighting systems and controls, and select and install them for appropriate applications

TEXTS: Required

Electricity for Agricultural Applications, Bern and Olson
 1st Edition, Iowa State Press
Agricultural Wiring Handbook, 14th Edition, National Food and Energy Council
Modern Commercial Wiring, Holzman, 3rd Edition, Goodheart-Wilcox

ADDITIONAL READING AND REFERENCES:

National Electric Code, National Fire Protection Association, Latest Edition
Electrical Wiring, Seventh Edition, Duncan and Wren, American Association of Vocational Instructional Materials.

DEPARTMENT OF AGRICULTURAL SCIENCES ATTENDANCE POLICY:

1. Regular and punctual attendance is expected of each student in the Department of Agricultural Sciences at Sam Houston State University.
2. Each faculty member will keep a written record of student attendance. Students will be expected to sign in for class and labs to comply with new federal guidelines.
3. Because of accelerated summer schedule, if a student misses two or more classes, the student's grade may be reduced by one letter grade. Additional penalties will be up to the discretion of the professor.
4. Three unexcused or unjustified tardies or early departures are considered one absence.
5. Excused absences must be documented by the student with a letter of confirmation from the sponsoring student organization, professor or doctor. Exemptions will include participation in departmental activities when prior approval is attained from the Department Chair or the sponsoring professor.

COURSE EVALUATION:

Lecture - Grades on regular exams, unscheduled/unannounced daily quizzes, and the final exam will account for 70% of the semester grade. Laboratory - Grades on laboratory exercises, individual participation in lab activities, housekeeping, and safety will account for 30% of the semester grade.

A = 90 – 100, B = 80 – 89, C = 70 – 79, D = 60 – 69, F = > 60

ACADEMIC DISHONESTY:

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including,

but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, purchasing papers collusion and the abuse of resource materials. Any such action will result in failing that exam, research paper, assignment, or the entire course, and a letter of explanation placed in the student's file.

DISRUPTIVE CONDUCT:

Students will refrain from behavior in the classroom or lab that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers **must be turned off before** class begins. Students **are prohibited from using tobacco products**, making offensive remarks, reading non-class materials, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate use of lap-top computers during class or lab will not be tolerated. Inappropriate behavior in the classroom or lab shall result in a directive to leave. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

VISITORS IN THE CLASSROOM:

Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in classroom.

AMERICANS WITH DISABILITIES ACT:

It is the policy of Same Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request assistance with academically related problems stemming from individual disabilities by contacting the Director of Counseling Center in the Lee Drain Annex or by calling (936) 294-1720. If you have a disability that may adversely affect your work in this class, then I encourage you to register with the Counseling Center and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: no accommodation can be made until you register with the Counseling Center.

STUDENT ABSENCES ON RELIGIOUS HOLY DAYS POLICY:

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first fifteen days of the semester or the first seven days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

INSTRUCTOR EVALUATIONS:

You will be asked to complete a course/instructor evaluation form toward the end of the semester.