



University of Puerto Rico
Mayagüez Campus
College of Agricultural Sciences
Department of Agricultural and Biosystems Engineering



OFFICIAL SYLLABUS

**MANAGEMENT AGRICULTURAL MACHINERY
SAGA 5006**

Credit Hours: 3	Contact Hours: Two (2) hours of conference and a laboratory period of three (3) hours per week
Prerequisites: TMAG 4015 or SAGA 4015 or authorization of the Director of the Department	Co-requisites:
Course Description (English): Study of the principles and practices for managing agricultural machinery. Analysis of the relationship among machinery, implements, agricultural production and economic aspects.	
Course Description (Spanish): Estudio de los principios y prácticas para la administración de la maquinaria agrícola. Análisis de la relación entre maquinas, implementos, producción agrícola y aspectos económicos.	
Learning Objectives: After completing the course, the student should be able to: a. Understand the managerial and economic aspect of modern power and machinery in agricultural systems. b. Understand the selection of equipment based on cost determination and performance.	

Content Outline and Time Distribution:

<i>Topics to be covered</i>		<i>Contact hours</i>
I.	Introduction	1
II.	Economic Performance 1. Machine Performance 2. Power Performance 3. Labor Performance	2 2 2
III.	Costs 1. Cost Determinations	3
IV.	Operations 1. Tillage 2. Seed- bed preparation 3. Cultivation 4. Seeding Machine Calibration 5. Grain Harvesting 6. Forage Harvesting 7. Farm Processing 8. Special Crop Operation	2 1 1 2 2 2 2 2
V.	Power 1. The Farm Tractor	2
VI.	Equipment Selection 1. Machinery Selection 2. Power Selection 3. Used Equipment	2
VII.	Exam	2
<i>Total hours: (equivalent to course contact period)</i>		30

<i>Laboratories</i>		<i>Contact hours</i>
1.	Problem solving	3
2.	Tractor study	3
3.	Machine performance	6
4.	Tractor power performance	3
5.	Tillage equipment	3
6.	Row planter	3
7.	Sprayer	3
8.	Mowers	3
9.	Fuel economy comparison	3
10.	Machinery selection	6
11.	Field Trips	9
12.		
<i>Total hours: (equivalent to laboratory contact period)</i>		45

Instructional Strategy

The course consists of a two 1-hour of lecture and a 2-hours of laboratory per week. This course is designed to deal with further study of agricultural machinery and their power relation. Hand-on experience and maintenance program for some equipment in AM lab will be observed and practiced. Heavy equipment that are not available in the lab will be covered through the scheduled field trips during the semester. There will be some laboratory sessions where only calculations of performance and calibration will be discussed.

Instructional Techniques:

- conference discussion computation laboratory
 seminar with formal presentation seminar without formal presentation workshop
 art workshop practice trip thesis special problems
 tutoring research others, please specify:

Learning Resources and Minimum Facilities Available or Required:

The course will be taught in a traditional classroom. Equipment such as transparencies and head projector will be used in lectures. The computer room will be used in some of the laboratories. General Library and University Computer Center is available to obtain professor's reference materials.

Evaluation Techniques and Relative Weight:

	Percent
<input checked="" type="checkbox"/> 2 Exams (25% each)	50
<input checked="" type="checkbox"/> Final exam	25
<input type="checkbox"/> Short quizzes	
<input checked="" type="checkbox"/> Laboratory	25
<input type="checkbox"/> Oral reports	
<input type="checkbox"/> Monographies	
<input type="checkbox"/> Portfolio	
<input type="checkbox"/> Journals	
<input type="checkbox"/> Projects	
<input type="checkbox"/> Others, specify:	
TOTAL: 100%	0%

Grading System:

Quantifiable (letters) Not Quantifiable

Standard Curve: 90 to 100 A; 80 < 90 B; 70 < 80 C; 60 < 70 D; 0 < 60 F

Bibliography:

Farm Power and Machinery Management. 9 th edition. Donnel Hunt. Iowa State university Press, Ames, Iowa, 1999.

Farm machinery Management. FMO Series of John Deere

According to Law 51:

Law 51: The Comprehensive Educational Services Act for People with disabilities states that after identifying with the instructor and the institution, the student with disabilities will receive reasonable accommodation in their courses and evaluations. For more information contact the Department of Counseling and Psychological services at the Office of the Dean of Students (Office DE 21) or call 787-265-3864 or 787-832-4040 x 3772, 2040 and 3864.

Academic Integrity:

The University of Puerto Rico promotes the highest standards of academic and scientific integrity. Article 6.2 of the UPR Students General Bylaws (Board of Trustees Certification 13, 2009-2010) states that academic dishonesty includes, but is not limited to: fraudulent actions; obtaining grades or academic degrees by false or fraudulent simulations; copying the whole or part of the academic work of another person; plagiarizing totally or partially the work of another person; copying all or part of another person answers to the questions of an oral or written exam by taking or getting someone else to take the exam on his/her behalf; as well as enabling and facilitating another person to perform the aforementioned behavior. Any of these behaviors will be subject to disciplinary action in accordance with the disciplinary procedure laid down in the UPR Students General Bylaws.—

Policy Against Discrimination Based on Sex, Sexual Orientation, and Gender Identity:

The University of Puerto Rico prohibits discrimination based on sex, sexual orientation, and gender identity in any of its forms, including that of sexual harassment. According to the Institutional Policy Against Sexual Harassment at the University of Puerto Rico, Certification Num. 130, 2014-2015 from the Board of Governors, any student subjected to acts constituting sexual harassment, may turn to the Office of the Student Ombudsperson, the Office of the Dean of Students, and/or the Coordinator of the Office of Compliance with Title IX for an orientation and/or formal complaint.

Sexual Harassment: Certification 130-2014-2015 states:

Sexual harassment in the workplace and in the study environment is an illegal and discriminatory act and is against the best interests of the University of Puerto Rico. All persons who understand they have been subject to acts of sexual harassment at the University of Puerto Rico may file a complaint and request that the institution investigate, where necessary, and assume the corresponding action by the university authorities. If the complainant is a student, he or she must refer his or her complaint to the Office of the Student Ombudsperson or that of the Dean of Students.

Certification 06-43 of the Academic Senate states, "The academic guidelines for offering online courses," defines:

Traditional face-to-face courses are those that have less than 25% of the course's regular contact hours via the Internet. Therefore, a three-credit course will be considered "face to face" if, of the 45 hours of regular contact, 11 or less are taught via the Internet. According to certification 16-43 of the Academic Senate, a course may include up to 25% of its total contact hours via the Internet. The objective of this is so that all professors have this alternative in the case of any unscheduled eventuality.

Includes attachments:

Yes

No