

Course Syllabus Secon Semester, Academic Year 2024

1. Faculty of Agriculture at Kamphaeng Saen

Department of Farm Mechatronics

2. Course code: 02027425 Credit: 3(3-0-6) *Pre: -* Course name: Agricultural Machinery and Resources Management

3.Instructor team:

Assoc.Prof. Pongsak Chontanasawat Assoc.Prof. Dr. Ratana Tangwongkit Dr.Sunattha Attisilwet Dr.Savita Tangwongkit E-mail : pongsak.c@gmail.com E-mail : <u>agrrnt@gmail.com</u> E-mail : <u>Sunattha.at@ku.th</u> E-mail : savita.tan@ku.th

4. Providing students with access to and advice outside of class hours:

Working days During official hours, except during teaching periods or when on official business outside of the premises. In case of emergency, students can contact us via Line group or Mobile phone.

5. Course Objectives:

Students can plan systematic farm management, manage technology, agricultural machinery, soil energy, fertilizers, pests appropriately and maintain a sustainable environment

6. Course Description

Agricultural system management such as management in machinery, energy, soil, water, fertilizer and pests for increasing the value of agricultural products and conserving energy, soil, water and other agricultural resources

PLOs	Knowledge	Specific skills	Generic skills	Attitude
PLO3 Be able to	- Principles of	- Able to use Excel program to	- Know technical	- Be responsible
summarize and	agricultural machinery	calculate and analyze in the	terms (English)	- Be punctual
discuss the results	and technology	management of agricultural	in agricultural	- Be honest
of the analysis	management	machinery, technology and	machinery and	- Follow the
critically or	-Able to creatively	resources creatively	technology	movement of
creatively in the	present the results of	- Have skill to choose the	- Computer and	academic news
field of	analysis of agricultural	management method of	IT skills in	and information
agricultural	machinery management,	agricultural machinery and	agriculture	
machinery and	technology and	technology appropriately.		
technology	resources.			
PLO4: Be able to	Principles and sources	- Can search and follow		
search for and	of information to track	academic progress in		
pursue academic	academic progress in	agricultural machinery and		
progress and	agricultural machinery	technology		
integrate	and technology.	- Can analyze, synthesize, and		
knowledge of		design problem-solving		
agricultural		methods by integrating		
machinery and		knowledge in agricultural		
technology.		machinery and technology		
		- Have skills in presenting		
		academic progress in		
		agricultural machinery and		
		technology.		

7. Program Learning Outcomes: PLOs (7PLOs of the 2017 AMM revised curriculum)

PLO5: Be shown to morality, ethics, discipline, punctuality, honesty, responsibility towards oneself and society.	- University regulations for higher education of Kasetsart University	 -Able to appropriately adjust behavior during internship training. -Possesses a positive attitude toward oneself, others, and society. 	 Behave appropriately and serve as a good role model Comply with university regulations and refrain from misconduct Participate in various activities 	 Responsibility Honesty Follow the movement of agricultural academic news and information
			with intention and willingness	
PLO6: Be able to communicate their knowledge of agricultural machinery and technology which is appropriate to both in the academic section and the agricultural community.	 Presentation techniques, both written and narrated Using technology to communicate appropriately 	 Have skills in presenting academic progress in machinery Can use technical academic terms (Thai and English) in machinery and agricultural technology 	- Confidence in presentation	
PLO7: Be able to work with others as good leaders and members, and able to adapt to different situations appropriately.□		 Interpersonal skills for working with others and the ability to work effectively as part of a team. Leadership and followership skills, with a willingness to listen to colleagues' opinions. Problem-solving skills in various situations. 	- Possess presentation skills and the ability to listen to colleagues' opinions	 Has a positive attitude toward living and working with others. Adapts appropriately to different environments.

8. Course Learning Outcomes: CLOs และวิธีการวัดผลการเรียนรู้

Course Learning Outcomes: CLOs	วิธีการวัดผลการเรียนรู้	PLOs
CLO1: Able to explain the principles of	1.1 Complete exercises at the end of each	PLO3
farm management, agricultural	chapter/lecture exam	PLO4
machinery, energy, soil, water,	1.2 Discussion teaching process to enable students to	PLO5
fertilizer, pests, energy conservation and	demonstrate their understanding of knowledge and	PLO6
other agricultural resources, and	be able to think critically	PLO7
"Sustainable Development Goals	1.3 Group project and classroom presentation	
(SDGs)"		
CLO2: Able to be planning farm systems,	2.1 Complete the exercises at the end of each	PLO3
agricultural machinery, energy, soil,	chapter/lecture exam	PLO4
water, fertilizer, pests, energy	2.2 Discussion teaching process to enable students to	PLO5
conservation and other agricultural	demonstrate their understanding of knowledge and	PLO6
resources.	be able to think analytically	PLO7
	2.3 Used Microsoft Project to plan the specified farm work system	
CLO3: Able to search for academic	3.1 Observe behavior in expressing opinions and	PLO4
information, analyze, summarize and	presenting by using rubric scoring	
present.		
CLO4: Have research skill in academic	4.1 All students search, study, analyze, summarize,	PLO4
information, analyze, and summarize	present, and answer questions (in English),	

9. Measuring Academic Achievement

9.1	Academic research and presentation	l	20%
9.2	Measuring learning achievement		70%
	- Final Exam	(25%)	
	- Assignment	(25%)	
	- Group Project	(20%)	

9.3 Interest in learning, responsibility, answering questions <u>10%</u>

<u>Total 100%</u>

Score level	>80	75-79	70-74	65-69	60-64	55-59	50-54	<50
Grade	А	B+	В	C+	С	D+	D	F

10. Documents to read:

Books, research reports, articles, and other relevant and up-to-date documents as assigned

11. Evaluation of teaching results:

From the student's questionnaire, students must evaluate their teaching results at www.kps.ku.ac.th (go to Students, Teaching System) with the university's teaching evaluation form before the mid-term and final exams.

12. Review to improve teaching methods and teaching systems:

✓ No review because students were satisfied with the teaching in the previous session with a score of 4.83 and had no suggestions for improvement.

□ Reviewed by reviewing from.....

Not revised
Deviced to be consistent with

□ Revised to be consistent with.....

13. Teaching improvement from teaching evaluation results:

\Box No teaching evaluation

☑ Teaching evaluation, the average score of the previous evaluation is equal to 4.83

☑ Improvements as follows Although there are evaluation results equal

to 4.83 but it comes from only 55.05% of the evaluators. So, there must be a method to encourage students to evaluate in the evaluation system at a higher than 80%

14. Schedule of activities related to teaching and learning (see Table 1)

Friday 9:00-12:00 at Seminar room, Agricultural Mechatronics Laboratory Building.

Table 1 Schedule of activities related to teaching and learning of 02027425: Agricultural Machinery and Resources Management

Friday 9:00-12:00 at Seminar room, Agricultural Mechatronics Laboratory Building.

No	Lesson	LLOs	L-level	Teaching/Learning method	Assessment	Lecturer	CLOs	PLOs
1	 Consider Course Syllabus together and reach a mutual agreement. Principles of Administration and Management with Agriculture and Technology 	- Able to discuss principles of management and administration with agriculture and technology.	K: An S: Pre A: Val	 Explain the learning outcomes (CLOs), teaching methods, assessment and measurement of learning outcomes through the Course Syllabus which is uploaded on Ed-Farm. Lecture on the topic "Principles of Administration and Management of Agriculture and Technology" Discussion 	 Assignment at the end of the chapter Evaluate questioning skills 	Pongsak	CLO1 CLO2 CLO3 CLO4	PLO4 PLO5 PLO6 PLO7
2-4	Management and analysis of agricultural machinery technology -System Analysis - Power Plants in Agricultural Systems - Planting Systems - Spraying Systems - Crop Harvesting Systems	- Able to discuss on topic "Management and analysis of agricultural machinery technology"		 Lecture and Give examples of case related to each topic of Management and analysis of agricultural machinery technology System Analysis Power Plants in Agricultural Systems Planting Systems Spraying Systems Crop Harvesting Systems Discussion 	 Evaluate questioning skills Assignment at the end of the chapter Complete a final assessment for every chapter. 	Ratana Sunuttha		
5	-Analysis and planning of farm labor management - Using Microsoft Project to plan the specified farm work system	-Able to analyze and plan farm labor management - Able to use Microsoft Project to plan the specified farm work system.		 Lecture and Give examples related to topic of "Analysis and planning of farm labor management Teach students to install Microsoft Project Demonstrate examples of farm system planning using Microsoft Project Assign students to do a project to plan the given farm system 	 Students can download the Microsoft Project program Evaluation of the Project report 	Pongsak		
6	-Energy management in renewable energy farms in agriculture -Soil, water, and fertilizer management	 Able to discuss on topic "energy management in renewable energy farms in agriculture" Can discuss the principles of soil, water, fertilizer, and pest management 		 Lecture and Give examples of case related to each topic of Energy management in renewable energy farms in agriculture Soil, water, and fertilizer management Discussion 	 Evaluate questioning skills Complete a final assessment for every chapter. 	Sunttha		
7-10	Farm management decision making -The farmer & decision making -Resources & Farm management -Input, markets & Farm management	 -Able to discuss on topic "Farm management decision making" - Have good presentation and question-answering skills 		 Lecture and Give examples case related to the topic of Farm management decision making Discussion Group project related to the topic of Farm management decision making Classroom presentation of Group project 	 Evaluate questioning skills Assignment at the end of the chapter Group project report and presentation assessment Complete a final assessment for every chapter 	Savita		

11	-Risk, vulnerability & sustainability -Information & farm management SDGs: Sustainable Development Goals	- Able to explain "SDGs: Sustainable Development Goals"	1) Lecture and Give examples case related to the topic of SDGs: Sustainable Development Goals 2) Discussion	 Evaluate questioning skills Complete a final assessment for every chapter. 	Pongsak
12-15	Students present their research and answer questions	 Able to search for academic work Able to present work appropriately Able to solve problems and answer questions Have confidence and a good personality in presenting 	 Train students to create appropriate and interesting presentation media Train students to present their research results and answer questions for 10 minutes each Train students to ask questions to the presenter Train students to dress appropriately and use appropriate words and manners during the presentation 	Use Rubric to provide assessment criteria	Pongsak Ratana Sunuttha Savita