

SYSTEM ANALYSIS AND PLANNING IN AGRICULTURAL MACHINERY

1	Course Title:	SYSTEM ANALYSIS AND PLANNING IN AGRICULTURAL MACHINERY
2	Course Code:	BSM5027
3	Type of Course:	Optional
4	Level of Course:	Third Cycle
5	Year of Study:	1
6	Semester:	1
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. Halil Ünal
15	Course Lecturers:	Yok
16	Contact information of the Course Coordinator:	Prof. Dr. Halil ÜNAL e-posta : hunal@uludag.edu.tr Telefon: 0 224 2941607 Adres: Bursa Uludağ Üniversitesi, Ziraat Fakültesi, Biyosistem Mühendisliği Bölümü, Görükle Kampüsü, 16059, Nilüfer/BURSA
17	Website:	
18	Objective of the Course:	To provide theoretical and practical learning of numerical estimation methods, operations research techniques, linear programming and network analysis methods. It is the ability of students to show a systematic approach to the problems they may encounter, to think analytically, to make predictions for the future and to gain the skills of project planning and evaluation.
19	Contribution of the Course to Professional Development:	Learn theoretically and practically operations research techniques and linear programming and network analysis methods. Learns analytical thinking, making predictions for the future. It is the acquisition of project planning and evaluation skills.
20	Learning Outcomes:	
	1	Learns numerical estimation methods.
	2	Learn theoretically and practically operations research techniques and linear programming and network analysis methods.
	3	The student can show a systematic approach to the problems he / she may encounter.
	4	Learns analytical thinking, making predictions for the future.
	5	It is the acquisition of project planning and evaluation skills.
	6	
	7	
	8	
	9	
	10	
21	Course Content:	

	Course Content:	
Week	Theoretical	Practice
1	The system concept, basic structural elements of the system, system operation and classification of systems according to their behavior.	
2	Model definition, types and explanation of modeling principles.	
3	Explanation of working stages in system analysis.	
4	Systematic approach to agricultural mechanization.	
5	Distribution charts, time series models (sliding averages, trend projections), causal estimation methods (single and multiple regression) and judicial Delphi method, which are included in numerical estimation methods.	
6	Distribution charts, time series models (sliding averages, trend projections), causal estimation methods (single and multiple regression) and judicial Delphi method, which are included in numerical estimation methods.	
7	Distribution charts, time series models (sliding averages, trend projections), causal estimation methods (single and multiple regression) and judicial Delphi method, which are included in numerical estimation methods.	
8	Distribution charts, time series models (sliding averages, trend projections), causal estimation methods (single and multiple regression) and judicial Delphi method, which are included in numerical estimation methods.	
9	Reliability and method comparisons in forecasting.	
10	Linear Programming Applications and Problem Formulation definition and explanation with examples,	
11	Linear Programming Applications and Problem Formulation definition and explanation with examples,	
12	Canonical and Standard Form models and explanation of inequality transformations.	
13	Simplex Method definition, graphical method in bivariate model analysis, Simplex algorithm, artificial variables technique,	
14	Some special cases encountered in analysis, sensitivity analysis.	
22	Textbooks, References and/or Other Materials:	
23	Assesment	
TERM LEARNING ACTIVITIES		NUMBE R
Midterm Exam		0
Quiz		0
Home work-project		4
Final Exam		1
Total		5
Contribution of Term (Year) Learning Activities to Success Grade		40.00

Contribution of Final Exam to Success Grade	60.00
Total	100.00
Measurement and Evaluation Techniques Used in the Course	Measurement and evaluation is carried out according to the principles of Bursa uludag University Graduate Education Regulation.
24	ECTS / WORK LOAD TABLE

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	0	0.00	0.00
Homeworks	4	32.00	128.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	0	0.00	0.00
Others	0	0.00	0.00
Final Exams	1	3.00	3.00
Total Work Load			173.00
Total work load/ 30 hr			5.77
ECTS Credit of the Course			6.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	4	4	4	5	3	4	4	4	4	4	3	5	0	0	0	0
ÖK2	4	4	5	4	3	4	4	4	3	4	4	4	0	0	0	0
ÖK3	3	4	4	4	4	4	5	5	4	3	4	4	0	0	0	0
ÖK4	4	3	3	4	4	5	5	5	4	4	4	4	0	0	0	0
ÖK5	4	4	4	4	3	4	3	4	4	4	4	3	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			