MODELING TECHNICS IN AGRICULTURAL MACHINERY

1	Course Title:	MODELING TECHNICS IN AGRICULTURAL MACHINERY	
2	Course Code:	BSM6017	
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):	2.00	
9	Practice (hour/week):	2.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Prof. Dr. ALİ VARDAR	
15	Course Lecturers:	YOK	
16	Contact information of the Course Coordinator:	e-posta: dravardar@uludag.edu.tr Telefon: 0 224 2941605 Adres: Bursa Uludağ Üniversitesi, Ziraat Fakültesi, Biyosistem Mühendisliği Bölümü, Görükle Kampüsü, 16059, Nilüfer/BURSA	
17	Website:		
18	Objective of the Course:	The aim of the course; To provide students with basic information on scientific research techniques, mathematical modeling, three-dimensional basic design, stress analysis.	
19	Contribution of the Course to Professional Development:	It contributes to the ability of the student to make modeling related to his field.	
20	Learning Outcomes:		
		1	Understanding the importance of the concept of mathematical modeling
		2	Ability to use mathematical modeling techniques in problem solving
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21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	introduction	introduction
2	Scientific research techniques	Application examples
3	Thought and model	Application examples

4	Mathematical models and rational logic models	Application examples
5	Differential models	Application examples
6	Experimental modeling principles	Application examples
7	Rational-experimental modeling	Application examples
8	Finite small range (numerical) modeling	Application examples
9	An overview	An overview
10	Modeling with probability methods and churn models	Application examples
11	Modeling with artificial neural networks method	Application examples
12	Modeling with fuzzy logic method	Application examples
13	Optimization	Application examples
14	An overview	An overview

22	Textbooks, References and/or Other Materials:	Şen, Z., 2002. Bilimsel düşünce ve matematik modelleme ilkeleri, Su Vakfı Yayınları, İstanbul. Şen, Z., 2009. Temiz enerji kaynakları ve modelleme ilkeleri, Su Vakfı Yayınları, İstanbul. Elmas, Ç., 2007. Yapay zeka uygulamaları, Seçkin yayıncılık, Ankara. Şen, Z., 2009. Bulanık mantık ilkeleri ve modelleme, Su Vakfı Yayınları, İstanbul. Tülücü, K., 1997. Optimizasyon, Çukurova Üniversitesi Ziraat Fakültesi Genel Yayın No: 189, Adana.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	0	0.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	100.00
Total	1	100.00
Contribution of Term (Year) Learning Activities to Success Grade		0.00
Contribution of Final Exam to Success Grade		100.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		The effect of the final exam on the course-passing grade is 100%.

24	**ECTS / WORK LOAD TABLE**

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	3.00	42.00
Homeworks	1	50.00	50.00
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	36.00	36.00
Total Work Load			184.00
Total work load/ 30 hr			6.13
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	4	4	3	3	4	3	3	1	4	0	0	0	0
ÖK2	4	4	4	3	4	3	3	4	3	3	4	4	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**