DESIGN OF IRRIGATION MACHINERY										
1	Course Title:	DESIGN	OF IRRIGATION MACHINERY							
2	Course Code:	BSM6014								
3	Type of Course:	Optional								
4	Level of Course:	Third Cycle								
5	Year of Study:	1								
6	Semester:	2								
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: Uludağ Üniversitesi, Ziraat Fakültesi, Biyosistem Mühendisliği Bölümü, Görükle Kampüsü, 16059, Nilüfer/BURSA								
17	Website:									
18	Objective of the Course:	The aim of the course is to enable the student to design irrigation machines.								
19	Contribution of the Course to Professional Development:	It contributes to the identification and design of irrigation machines / systems to be applied in agricultural areas.								
20	Learning Outcomes:									
		1	To understand the importance of irrigation concept;							
		2	Understanding the importance of the concept of machine design;							
		3	To be able to design irrigation machines							
		4								
		5								
		6								
		7								
		8								
		9								
		10								
21	Course Content:									
	Course Content:									
	Theoretical		Practice							
1	Physical properties of water, flow typ properties		Physical properties of water, flow types and properties							
2	Equivalent pipe length and total losse	es	Equivalent pipe length and total losses							
3	Planning the pipeline	,	Planning the pipeline							
4	Working principles and classification centrifugal pumps	of	Centrifugal pump application							

5	Axial thrust and Centrifugal pump pa	rts	Centrifugal pump application							
6	Theoretical principles in centrifugal p	umps	Problem solutions							
7	Cavitation and its characteristics		Problem solutions							
8	Selection and operation in the pumpi Selection application in the pumping		Problem solutions							
9	Determining the centrifugal pump typ	е	Santrifüj pompa uygulaması							
10	Calculation of pump shaft power and diameter		Problem solutions							
11	Sizing of pump impeller - Determinat impeller inlet conditions	ion of	Pumping pump calculation example							
12	Sizing of pump impeller - Determinat impeller inlet conditions	ion of	Pumping pump calculation example							
13	Drawing the impeller		Drawing the impeller							
14	Checking the diffuser requirement, determining the snail size		Pumping pump calculation example							
22	Textbooks, References and/or Other Materials:		1. Keskin K., Güner M., 2002, Sulama Makinaları, Ankara Üniversitesi Ziraat Fakültesi, Yayın No: 1524, Ankara. 2. Güner M., 2011, Sulama Makinaları Yardımcı Ders Kitabı, Ankara Üniversitesi Ziraat Fakültesi, Yayın No: 1585, Ankara. 3. Güner M., Keskin R., 2012, Sulama Makinaları, Ankara Üniversitesi Ziraat Fakültesi, Yayın No: 1587, Ankara.							
23	Assesment									
TERM L	EARNING ACTIVITIES	NUMBE R	WEIGHT							
Midtern	n Exam	0	0.00							
Quiz		0	0.00							
Home v	vork-project	0	0.00							
Final E	xam	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							
Measur Course	•	sed in the	The effect of the final exam on the course-passing grade is 100%.							
24	24 ECTS / WORK LOAD TABLE									

Activites	Number	Duration (h	our) Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	5.00	70.00
Homeworks	4	10.00	40.00
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	10.00	10.00
Total Work Load			176.00
Total work load/ 30 hr			5.87
ECTS Credit of the Course			6.00
OC CONTRIBUTION	LOE LEADAING OUTOO	MEO TO DDOO!	

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