RESEARCH AND EXPERIMENTAL METHODS									
1	Course Title:	RESEAR	CH AND EXPERIMENTAL METHODS						
2	Course Code:	TAR3324-Z							
3	Type of Course:	Compuls	sory						
4	Level of Course:	First Cycle							
5	Year of Study:	3							
6	Semester:	6							
7	ECTS Credits Allocated:	4.00	4.00						
8	Theoretical (hour/week):	2.00	2.00						
9	Practice (hour/week):	2.00	2.00						
10	Laboratory (hour/week):	0							
11	Prerequisites:	-							
12	Language:	Turkish							
13	Mode of Delivery:	Face to face							
14	Course Coordinator:	Prof. Dr. A.TANJU GÖKSOY							
15	Course Lecturers:	-							
16	Contact information of the Course Coordinator:	agoksoy@uludag.edu.tr 0 224 2941515 Uludağ Üniversitesi Ziraat Fakültesi Tarla Bitkileri Bölümü Görükle/Bursa							
17	Website:								
18	Objective of the Course:	To train students in understanding of basic principles of developing and research. To provide knowledge on basic principles of agricultural experiments. To give knowledge on statistical principles in planning experiments. To train students in statistically analysis of agricultural experimentals.							
19	Contribution of the Course to Professional Development:								
20	Learning Outcomes:								
		1	Be able to understand research idea and it's important in development						
		2	Be able to know on principles of developing and research						
		3	Be able to earn skill on planning of research projects and their evaluation on the base national and international						
		4	Be able to select suitable experimental design in order to increase truth degree in experiment						
		5	Be able to measure and observe the characters according to statistical principles						
		6	Be able to select suitable experimental design according to purpose of research						
		7	Be able to earn skill on conducte of trials in good health and niceness						
		8	Be able to earn skill on right and objective deciding						
		9							
		10							
21	Course Content:								

	Course Content:											
Week	Theoretical		Pr	Practice								
1	Introduction to Research and Experir Methods ; Research and it's role in development Research and Scientific Method, planning of the researches in national, kinds of research	mental c n the	Visit to ULUTEK									
2	Arangement of the agricultural trials, increase truth degree in experiment, experimental error and factors decrea Kinds of the agricultural trial	asing it.	Visit to agricultural trials									
3	Basic and statistical principals; mean Standard error of mean, Standard de estimation of mean of teorical treatme population, Bartlett, Levene and F tes significance test	, eviation, ent sts,	Solving problems on the F-test, Barlett test, Levene test and hypothesis tests									
4	Comparison of two groups ; paired sa	amples	So	lving problems on the	matched pairs							
5	Comparison of two groups ; independ samples method	dend	So	olving problems on the	independend sam	ples method						
6	Analysis of variance (ANOVA); signif tests and estimation of variance com	icance ponents	So	olving problems on ana	alysis of variance							
7	Introduction to experimental desing; Completely randomized design and a	analysis	So	lving problems on the	completely randon	nized design						
8	Grouping of different treatments; LSE Duncan's multiple range tests and or	D and thogonal	Solving problems on LSD and Duncan tests									
Activit	es			Number	Duration (hour)	Total Work Load (hour)						
Theore			•	14	2.00	28.00						
Practic	als/Labs			14	2.00	28.00						
Selfstu	Statisticarparations and significance	tests in	Sp	Ning problems on sta	tentically analysis ar	20.00 designificance						
Homew	vorks		4	4	3.00	12.00						
Profect	Latin Square Design; analysis of vari	ance and	Sq	ving problems on Lat	ið guare design	0.00						
Field S	tudies		(	0	0.00	0.00						
Midtern	aexears and significance test		Ĺ	1	12.00	12.00						
Others			(	0	0.00	0.00						
Final E	Xams			1	20.00	20.00						
Total W	Vork Load					120.00						
Total w	ork load/ 30 hr		2	Gomez,K.A.,and A.A.	Gomez.1983.Statis	ifcap						
ECTS (	Credit of the Course					4.00						
			3.Little,T.M.,andF.J.Hills.1977.Agricultural Experimentation.Design and Analysis.John Wiley Sons, Newyork.									
23 Assesment												
TERM L	EARNING ACTIVITIES	NUMBE R	WE	EIGHT								
Midterm Exam 1				30.00								
Quiz 0				0.00								
Home	work-project	8	10.00									
Final Exam 1				.00								
Total 10				0.00								

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	

## 24 ECTS / WORK LOAD TABLE

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	3	3	4	4	3	4	3	4	3	0	0	0	0
ÖK2	2	2	3	3	3	3	4	3	3	3	2	3	0	0	0	0
ÖK3	3	2	5	3	3	2	3	3	5	3	3	4	0	0	0	0
ÖK4	3	2	3	4	3	1	2	3	3	2	4	2	0	0	0	0
ÖK5	1	2	4	2	3	4	3	4	2	4	3	3	0	0	0	0
ÖK6	3	3	4	3	1	3	2	4	3	3	4	4	0	0	0	0
ÖK7	3	2	2	3	2	3	4	3	3	2	3	2	0	0	0	0
ÖK8	3	3	5	4	2	3	4	4	3	3	4	2	3	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib1 very low2 loutionLevel:			2 Iow		3	Medi	um	4 High			5 Very High					