

SEED SCIENCE AND TECHNOLOGY

1	Course Title:	SEED SCIENCE AND TECHNOLOGY
2	Course Code:	BAH4116-S
3	Type of Course:	Optional
4	Level of Course:	First Cycle
5	Year of Study:	4
6	Semester:	8
7	ECTS Credits Allocated:	4.00
8	Theoretical (hour/week):	1.00
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. MERYEM İPEK
15	Course Lecturers:	Doç. Dr. Sevinç Başay
16	Contact information of the Course Coordinator:	msipek@uludag.edu.tr Tel:02242941485 Bursa Uludağ Üniversitesi Ziraat Fakültesi Bahçe Bitkileri Bölümü Görükle BURSA
17	Website:	
18	Objective of the Course:	To teach students the principles of seed physiology, and to transfer knowledge about the technological applications used in the industry, • To improve their skills on seed technology with the laboratory practices, • To provide students the possibility of closely examine the seed industry with the technical excursion to one of the seed companies in the region.
19	Contribution of the Course to Professional Development:	Students will gain knowledge and experience in seed technology issues and apply the knowledge learned in this course in their professional life.
20	Learning Outcomes:	
	1	To understand the basics of the seed physiology;
	2	To explain seed morphology and seed ageing, dormancy and germination physiology ;
	3	To interpret the effects of various technological applications used in the industry with regard to the physiological bases of seeds;
	4	To apply seed testing procedures related to international standards ;
	5	To recognize the problems encountered in the seed industry related to seed technology and to suggest the solutions;
	6	To participate in a team-work by preparing and presenting projects and assignments on seed technology and to transfer the obtained knowledge to the practice;
	7	To explain the concepts related to the international seed industry ;
	8	To interpret the current legislation on seeds;
	9	
	10	
21	Course Content:	

	Course Content:			
Week	Theoretical	Practice		
1	Giving information about the course	Establishing practice groups and sharing of duties		
2	The physical structure and chemical composition of seeds	Determination of 1000 seed weight		
3	The physiology of seed ageing	Determination of seed moisture content		
4	Seeds dormancy	Set up of seed germination tests		
5	The physiology of seed germination	Evaluation of germination tests		
6	Seed viability tests	Electrical conductivity (EC) test		
7	Seed vigour tests	Radicle emergence test		
8	Technological treatments of the seeds - 1	Tetrazolium (TZ) test		
9	Technical excursion	MayAgro Seed Company (http://www.may.com.tr)		
10	Technological treatments of the seeds - 2	NaOCl test and hydration treatments		
11	Technological treatments of the seeds - 2	Presentation of assignments and projects		
12	Technological treatments of the seeds - 3	Presentation of assignments and projects		
13	Concepts of the seed industry and current legislation on seeds	Presentation of assignments and projects		
14	General review of the course	General review of the course		
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	Seed Science and Technology. Kluwer Academic Publishers, Massachusetts, USA, 1973. P. 1-1000		100.00	100.00
Practicals/Labs		14	2.00	28.00
Self study and preperation		International Seed Testing Association. Bassersdorf, Switzerland. ISTA. 2012. International Rules for Seed	4.00	4.00
Homeworks		1	4.00	4.00
Projects		Association. Bassersdorf, Switzerland. McDonald, M.B. and Cleveland, L.O. 1995. Seed Science and Technology	10.00	10.00
Field Studies		0	0.00	0.00
Midterm exams		Iowa, USA. 231 p. Şehirci, S. 1997. Tohumluk ve Teknolojisi. Fakülteler Matbaası, İstanbul. 422 s.	25.00	25.00
Others		0	0.00	0.00
Final Exams		1	25.00	25.00
Total Work Load				120.00
TERM LEARNING ACTIVITIES		NUMBER	WEIGHT	
Total work load/ 30 hr				4.00
ECTS Credit of the Course				4.00
Quiz		0	0.00	
Home work-project		2	20.00	
Final Exam		1	60.00	
Total		4	100.00	
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		Homework and exam.		
24	ECTS / WORK LOAD TABLE			

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	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0
ÖK2	0	0	0	3	0	0	0	1	0	0	0	2	0	0	0	0
ÖK3	0	0	0	3	0	0	0	1	0	0	0	2	0	0	0	0
ÖK4	0	0	0	3	0	0	0	1	0	0	0	2	0	0	0	0
ÖK5	0	0	0	4	0	0	0	1	0	0	0	2	0	0	0	0
ÖK6	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
ÖK8	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low			2 low			3 Medium			4 High			5 Very High			