

ULUDAĞ ÜNİVERSİTESİ
2013-2014 EĞİTİM ÖĞRETİM YILI (ZORUNLU DERSLER)
DERS PLANLARI

EK-I

FAKÜLTE / YÜKSEKOKUL : MÜHENDİSLİK MİMARLIK FAKÜLTESİ

BÖLÜM / PROGRAM : MAKİNE MÜHENDİSLİĞİ BÖLÜMÜ

I. YARIYIL/GÜZ							II. YARIYIL/BAHAR						
KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	AKTS	KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	AKTS
		T	U	L					T	U	L		
MAT1071	MATEMATİK I	3	2	0	4	6	MAT1072	MATEMATİK II	3	2	0	4	6
FZK1071	TEMEL FİZİK I	3	0	2	4	6	FZK1072	TEMEL FİZİK II	3	0	2	4	6
MAK1001	MAKİNE MÜHENDİSLİĞİNE GİRİŞ	2	0	0	2	3	KMY1077	TEMEL KİMYA	3	0	0	3	3
MAK1003	TEKNİK RESİM	2	2	0	3	5	MAK1002	STATİK	3	0	0	3	3
MAK1005	BİLGİSAYAR PROGRAMLAMAYA GİRİŞ	2	0	1	2,5	4	MAK1004	BİLGİSAYAR DESTEKLİ TEKNİK RESİM	2	2	0	3	3
TUD101	TÜRK DİLİ I	2	0	0	2	2	MAK1010	MAKİNE MÜHENDİSLİĞİ BİLGİSAYAR UYGULAMALARI	2	0	1	2,5	3
ATA101	ATATÜRK İLKELERİ ve DEVRİM TARİHİ I	2	0	0	2	2	TUD102	TÜRK DİLİ II	2	0	0	2	2
YAD101	YABANCI DİL (İNGİLİZCE)	2	0	0	2*	2	ATA102	ATATÜRK İLKELERİ ve DEVRİM TARİHİ II	2	0	0	2	2
YAD111	YABANCI DİL (ALMANCA)	2	0	0	2*		YAD102	YABANCI DİL (İNGİLİZCE)	2	0	0	2*	2
YAD121	YABANCI DİL (FRANSIZCA)	2	0	0	2*		YAD112	YABANCI DİL (ALMANCA)	2	0	0	2*	
							YAD122	YABANCI DİL (FRANSIZCA)	2	0	0	2*	
Toplam Kredi					15,5	30	Toplam Kredi					19,5	30
III. YARIYIL/GÜZ							IV. YARIYIL/BAHAR						
KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	AKTS	KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	AKTS
		T	U	L					T	U	L		
MAT2083	DİFERANSİYEL DENKLEMLER	3	2	0	4	6	MAK2002	MÜHENDİSLİK MATEMATİĞİ	4	0	0	4	6
MAK2003	MUKAVEMET I	3	0	0	3	5	MAK2004	MUKAVEMET II	2	0	0	2	3
MAK2005	MALZEME BİLİMİ	3	0	0	3	5	MAK2006	MÜHENDİSLİK MALZEMELERİ	2	0	0	2	3
MAK2007	TERMODİNAMİK I	3	0	0	3	5	MAK2008	TERMODİNAMİK II	2	0	0	2	3
MAK2011	ELEKTRİK ve ELEKTRONİĞİN TEMELLERİ	2	0	0	2	3	MAK2010	DİNAMİK	4	0	0	4	7
MAK2037	İSTATİSTİK	2	0	0	2	3	MAK2012	SAYISAL ANALİZ	3	0	0	3	6
MAK...	SOSYAL SEÇMELİ DERS	2	0	0	2	3	ATA202	ATATÜRK İLKELERİ ve DEVRİM TARİHİ III (NUTUK)	2	0	0	2	2
Toplam Kredi					19	30	Toplam Kredi					17	30
V. YARIYIL/GÜZ							VI. YARIYIL/BAHAR						
KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	AKTS	KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	AKTS
		T	U	L					T	U	L		
MAK3001	AKIŞKANLAR MEKANIĞI	4	0	0	4	7	MAK3002	OTOMATİK KONTROL	4	0	0	4	6
MAK3003	MAKİNE ELEMANLARI I	3	0	0	3	6	MAK3004	MAKİNE ELEMANLARI II	2	0	0	2	4
MAK3005	ISI TRANSFERİ	4	0	0	4	7	MAK3006	HİDROLİK MAKİNELER	3	0	0	3	5
MAK3007	MAKİNE TEORİSİ	4	0	0	4	7	MAK3014	ÜRETİM YÖNTEMLERİ	3	0	0	3	4
MAK...	SOSYAL SEÇMELİ DERS	2	0	0	2	3	MAK3016	GENEL MAKİNE LABORATUARI	0	0	2	1	3
							ISL3008	GİRİŞİMCİLİK	1	0	0	0	2
							MAK...	TEKNİK SEÇMELİ DERS	2	0	0	2	3
							MAK...	SOSYAL SEÇMELİ DERS	2	0	0	2	3
Toplam Kredi					17	30	Toplam Kredi					17	30
VII. YARIYIL/GÜZ							VIII. YARIYIL/BAHAR						
KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	AKTS	KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	AKTS
		T	U	L					T	U	L		
MAK4001	MÜHENDİSLİK SİSTEM TASARIMI	0	4	0	2	4	MAK4402	MAKİNE TASARIMI	0	4	0	2	4
MAK...	I. GRUP TEKNİK SEÇMELİ DERS***	3	0	0	3	4	MAK4004	BİTİRME ÖDEVİ**	0	2	0	1	3
MAK...	I. GRUP TEKNİK SEÇMELİ DERS***	3	0	0	3	4	MAK...	I. GRUP TEKNİK SEÇMELİ DERS***	3	0	0	3	4
MAK...	I. GRUP TEKNİK SEÇMELİ DERS***	3	0	0	3	4	MAK...	I. GRUP TEKNİK SEÇMELİ DERS***	3	0	0	3	4
MAK...	II. GRUP TEKNİK SEÇMELİ DERS****	2	0	0	2	3	MAK...	I. GRUP TEKNİK SEÇMELİ DERS***	3	0	0	3	4
MAK...	II. GRUP TEKNİK SEÇMELİ DERS****	2	0	0	2	3	MAK...	II. GRUP TEKNİK SEÇMELİ DERS****	2	0	0	2	3
MAK4404	MAKİNE UYGULAMALARI LAB.	0	0	2	1	3	MAK...	II. GRUP TEKNİK SEÇMELİ DERS****	2	0	0	2	3
MAK4405	SEMİNER I	0	1	0	0	1	MAK4406	SEMİNER II	0	1	0	0	1
MAK4430	STAJ I	0	0	0	0	4	MAK4431	STAJ II	0	0	0	0	4
Toplam Kredi					16	30	Toplam Kredi					16	30

Toplam Kredi : 137

(240 ECTS)

Not: *Sadece bir yabancı dil dersi seçilecek.

Not: **MAK 4004 Bitirme Ödevi Güz Yarıyılında da açılır.

Not: ***Güz ve Bahar Yarıyılındaki I. Grup Teknik Seçmeli dersler eşdeğerdir.

Not: ****Güz ve Bahar Yarıyılındaki II. Grup Teknik Seçmeli dersler eşdeğerdir.

ULUDAG UNIVERSITY 2013-2014 ACADEMIC YEAR (REQUIRED COURSES) CURRICULUM													
FACULTY : ENGINEERING ARCHITECTURE													
DEPARTMENT : MECHANICAL ENGINEERING													
I. TERM/FALL							II. TERM/SPRING						
CODE	COURSE	Hours			Credit	ECTS	CODE	COURSE	Hours			Credit	ECTS
		T	U	L					T	U	L		
MAT1071	CALCULUS I	3	2	0	4	6	MAT1072	CALCULUS II	3	2	0	4	6
FZK1071	BASIC PHYSICS I	3	0	2	4	6	FZK1072	BASIC PHYSICS II	3	0	2	4	6
MAK1001	INTRODUCTION TO MECHANICAL ENGINEERING	2	0	0	2	3	KMY1077	BASIC CHEMISTRY	3	0	0	3	3
MAK1003	TECHNICAL DRAWING	2	2	0	3	5	MAK1002	STATICS	3	0	0	3	3
MAK1005	INTRODUCTION TO COMPUTER PROGRAMMING	2	0	1	2,5	4	MAK1004	COMPUTER AIDED TECHNICAL DRAWING	2	2	0	3	3
TUD101	TURKISH I	2	0	0	2	2	MAK1010	COMPUTER APPLICATIONS IN MECHANICAL ENGINEERING	2	0	1	2,5	3
ATA101	ATATÜRK'S PRINCIPLE and HISTORY OF TURKISH REVOLUTION I	2	0	0	2	2	TUD102	TURKISH II	2	0	0	2	2
YAD101	FOREIGN LANGUAGE (ENGLISH)	2	0	0	2*	2	ATA102	ATATÜRK'S PRINCIPLE and HISTORY OF TURKISH REVOLUTION II	2	0	0	2	2
YAD111	FOREIGN LANGUAGE (GERMAN)	2	0	0	2*		YAD102	FOREIGN LANGUAGE (ENGLISH)	2	0	0	2*	2
YAD121	FOREIGN LANGUAGE (FRENCH)	2	0	0	2*		YAD112	FOREIGN LANGUAGE (GERMAN)	2	0	0	2*	
							YAD122	FOREIGN LANGUAGE (FRENCH)	2	0	0	2*	
Total Credits					15,5	30	Total Credits					19,5	30
III. TERM/FALL							IV. TERM/SPRING						
CODE	COURSE	Hours			Credit	ECTS	CODE	COURSE	Hours			Credit	ECTS
		T	U	L					T	U	L		
MAT2083	DIFFERENTIAL EQUATIONS	3	2	0	4	6	MAK2002	ENGINEERING MATHEMATICS	4	0	0	4	6
MAK2003	STRENGTH OF MATERIALS I	3	0	0	3	5	MAK2004	STRENGTH OF MATERIALS II	2	0	0	2	3
MAK2005	MATERIALS SCIENCE	3	0	0	3	5	MAK2006	ENGINEERING MATERIALS	2	0	0	2	3
MAK2007	THERMODYNAMICS I	3	0	0	3	5	MAK2008	THERMODYNAMICS II	2	0	0	2	3
MAK2011	FUNDAMENTALS OF ELECTRICS and ELECTRONICS	2	0	0	2	3	MAK2010	DYNAMICS	4	0	0	4	7
MAK2037	STATISTICS	2	0	0	2	3	MAK2012	NUMERICAL ANALYSIS	3	0	0	3	6
MAK...	SOCIAL ELECTIVE COURSE	2	0	0	2	3	ATA202	ATATÜRK'S PRINCIPLE and HISTORY OF TURKISH REVOLUTION III (NUTUK)	2	0	0	2	2
Total Credits					19	30	Total Credits					17	30
V. TERM/FALL							VI. TERM/SPRING						
CODE	COURSE	Hours			Credit	ECTS	CODE	COURSE	Hours			Credit	ECTS
		T	U	L					T	U	L		
MAK3001	FLUID MECHANICS	4	0	0	4	7	MAK3002	AUTOMATIC CONTROL	4	0	0	4	6
MAK3003	MACHINE ELEMENTS I	3	0	0	3	6	MAK3004	MACHINE ELEMENTS II	2	0	0	2	4
MAK3005	HEAT TRANSFER	4	0	0	4	7	MAK3006	HYDRAULIC MACHINERY	3	0	0	3	5
MAK3007	MACHINE THEORY	4	0	0	4	7	MAK3014	MANUFACTURING METHODS	3	0	0	3	4
MAK...	SOCIAL ELECTIVE COURSE	2	0	0	2	3	MAK3016	GENERAL LABORATORY	0	0	2	1	3
							ISL3008	ENTREPRENEURSHIP	1	0	0	0	2
							MAK...	TECHNICAL ELECTIVE COURSE	2	0	0	2	3
							MAK...	SOCIAL ELECTIVE COURSE	2	0	0	2	3
Total Credits					17	30	Total Credits					17	30
VII. TERM/FALL							VIII. TERM/SPRING						
CODE	COURSE	Hours			Credit	ECTS	CODE	COURSE	Hours			Credit	ECTS
		T	U	L					T	U	L		
MAK4001	DESIGN OF ENGINEERING SYSTEMS	0	4	0	2	4	MAK4402	MACHINE DESIGN	0	4	0	2	4
MAK...	I.GROUP ELECTIVE COURSE***	3	0	0	3	4	MAK4004	GRADUATION STUDY**	0	2	0	1	3
MAK...	I.GROUP ELECTIVE COURSE***	3	0	0	3	4	MAK...	I.GROUP ELECTIVE COURSE***	3	0	0	3	4
MAK...	I.GROUP ELECTIVE COURSE***	3	0	0	3	4	MAK...	I.GROUP ELECTIVE COURSE***	3	0	0	3	4
MAK...	II.GROUP ELECTIVE COURSE****	2	0	0	2	3	MAK...	I.GROUP ELECTIVE COURSE***	3	0	0	3	4
MAK...	II.GROUP ELECTIVE COURSE****	2	0	0	2	3	MAK...	II.GROUP ELECTIVE COURSE****	2	0	0	2	3
MAK4404	MACHINE APPLICATION LABORATORY	0	0	2	1	3	MAK...	II.GROUP ELECTIVE COURSE****	2	0	0	2	3
MAK4405	SEMINAR I	0	1	0	0	1	MAK4406	SEMINAR II	0	1	0	0	1
MAK4430	PRACTICE I	0	0	0	0	4	MAK4431	PRACTICE II	0	0	0	0	4
Total Credits					16	30	Total Credits					16	30

Total Credits : 137 (240 ECTS)

Note: *Only one foreign language course must be chosen.

Note: **MAK 4004 Graduation Study is also offered in the fall semester.

Note: ***First group technical elective courses in fall and spring semesters are equivalent.

Note: ****Second group technical elective courses in fall and spring semesters are equivalent.

ULUDAĞ ÜNİVERSİTESİ
2013-2014 EĞİTİM-ÖĞRETİM YILI
II.GRUP TEKNİK SEÇMELİ DERSLER LİSTESİ
FAKÜLTE / YÜKSEKOKUL : MÜHENDİSLİK MİMARLIK FAKÜLTESİ
BÖLÜM / PROGRAM : MAKİNE MÜHENDİSLİĞİ BÖLÜMÜ

V.YARIYIL/GÜZ						VI.YARIYIL/BAHAR							
KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	ECTS	KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	ECTS
		T	U	L					T	U	L		
						MAK3030	İSİTMA HAVALANDIRMA SİSTEMLERİ	2	0	0	2	3	
						MAK3032	OTOMOTİV TEKNOLOJİSİNE GİRİŞ	2	0	0	2	3	
						MAK3034	KALİTE KONTROL	2	0	0	2	3	
						MAK3038	TALAŞLI İMALAT	2	0	0	2	3	
						MAK3044	MEKANİK TİTREŞİMLER ve AKUSTİK	2	0	0	2	3	
						MAK3050	ENERGY MANAGEMENT	2	0	0	2	3	
VII.YARIYIL/GÜZ						VIII.YARIYIL BAHAR							
KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	ECTS	KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	ECTS
		T	U	L					T	U	L		
MAK4003	ENERJİ DÖNÜŞÜMLERİ	2	0	0	2	3	MAK4417	TAŞITLARDA ALTERNATİF YAKIT UYGULAMALARI	2	0	0	2	3
MAK4005	İSİ TEKNİĞİNDE OTOMATİK KONTROL	2	0	0	2	3	MAK4008	METALİK SAÇLARDA ŞEKİLLENDİRME TEKNİKLERİ	2	0	0	2	3
MAK4007	ÜRETİM OTOMASYONU	2	0	0	2	3	MAK4014	MAKİNE TASARIMI ve İLERİ PROGRAMLAMA	2	0	0	2	3
MAK4009	HİDROLİK GÜÇ İLETİMİ	2	0	0	2	3	MAK4016	MÜHENDİSLİK MALZEMELERİNDE KIRILMA	2	0	0	2	3
MAK4013	TOZ METALURJİSİ	2	0	0	2	3	MAK4018	BIYOMEDİKAL İSİ ve KÜTLE TRANSFERİ	2	0	0	2	3
MAK4015	GÜNEŞ ENERJİSİ	2	0	0	2	3	MAK4022	ELEKTROHİDROLİK DENETİM SİSTEMLERİ	2	0	0	2	3
MAK4017	MAKİNE TASARIMI ve PROGRAMLAMA	2	0	0	2	3	MAK4024	BANTLI TRANSPORTÖRLER	2	0	0	2	3
MAK4019	ELEKTRONİK SİSTEMLERİN SOĞUTULMASI	2	0	0	2	3	MAK4026	YANGIN TESİSATI ve YANGINDAN KORUNMA	2	0	0	2	3
MAK4048	SANAYİDE ENERJİ TASARRUFU	2	0	0	2	3	MAK4030	ENDÜSTRİYEL KONTROL SİSTEMLERİ ve ÖLÇME	2	0	0	2	3
MAK4023	HİBRİT ARAÇLAR	2	0	0	2	3	MAK4036	TAŞIT KAYNAKLI KİRLİTİCİLER ve KONTROLÜ	2	0	0	2	3
MAK4029	SERAMİK MALZEMELER	2	0	0	2	3	MAK4038	KAYNAK TEKNOLOJİSİ	2	0	0	2	3
MAK4033	YENİLENEBİLİR ENERJİ KAYNAKLARI	2	0	0	2	3	MAK4040	İSİ EKONOMİSİ	2	0	0	2	3
MAK4035	KOROZYON ve KOROZYONDAN KORUNMA	2	0	0	2	3	MAK4067	İSİ POMPASI	2	0	0	2	3
MAK4041	OTOMOTİV ENDÜSTRİSİNDE YENİ TEKNOLOJİLER	2	0	0	2	3	MAK4044	TERMİK AKIŞLAR DİNAMİĞİ	2	0	0	2	3
MAK4045	PNÖMATİK GÜÇ İLETİMİ	2	0	0	2	3	MAK4021	EŞANJÖRLER	2	0	0	2	3
MAK4075	TAŞIT ELEKTRİĞİ	2	0	0	2	3	MAK4060	İMALAT ve MONTAJ İÇİN TASARIM	2	0	0	2	3
MAK4077	KONVANSİYONEL GÜÇ İLETİM SİSTEMLERİ	2	0	0	2	3	MAK4068	SİHHİ TESİSAT	2	0	0	2	3
MAK4079	FABRİKA ORGANİZASYONU	2	0	0	2	3	MAK4071	MEKANİK TAHRİK ELEMANLARI	2	0	0	2	3
MAK4083	PAKET PROGRAMLAR İLE ANALİZ ve ÇÖZÜM	2	0	0	2	3	MAK4094	ÖLÇME TEKNİKLERİ ve ANALİZİ	2	0	0	2	3
MAK4089	MEKATRONİĞE GİRİŞ	2	0	0	2	3	MAK4099	ELEKTROPNÖMATİK OTOMASYON SİSTEMLERİ	2	0	0	2	3
MAK4091	ERGONOMİ	2	0	0	2	3	MAK4410	ROBOT DİNAMİĞİ ve KONTROLÜ	2	0	0	2	3
MAK4081	ROBOTİĞE GİRİŞ	2	0	0	2	3	MAK4411	MEKATRONİK SİSTEMLERİN TASARIMI ve DİNAMİĞİ	2	0	0	2	3
MAK4051	FUNDAMENTAL MECHANICS OF FLUIDS	2	0	0	2	3	MAK4412	GENEL METROLOJİ	2	0	0	2	3
MAK4052	INDUSTRIAL ENERGY CONSERVATION	2	0	0	2	3	MAK4053	RECENT ADVANCES IN MATERIALS SCIENCE	2	0	0	2	3
MAK4055	PROFESSIONAL ENGLISH I	2	0	0	2	3	MAK4054	EXPERIMENTAL METHODS FOR ENGINEERS	2	0	0	2	3
MAK4413	MÜHENDİSLİK TASARIMINDA GÜVENİRLİK	2	0	0	2	3	MAK4056	PROFESSIONAL ENGLISH II	2	0	0	2	3
MAK4414	SÜRDÜRÜLEBİLİR ÜRÜN TASARIMI	2	0	0	2	3	MAK4415	TOPLAM VERİMLİ ÜRETİM ve BAKIM	2	0	0	2	3
MAK4419	TAHRİBATSIZ MUAYENE YÖNTEMLERİ	2	0	0	2	3	MAK4416	MİKRO SİSTEMLER	2	0	0	2	3
							MAK4418	HASAR ANALİZİ	2	0	0	2	3
							MAK4420	PLASTİK MALZEMELER	2	0	0	2	3
							MAK4095	MÜHENDİSLİK EKONOMİSİ	2	0	0	2	3

ULUDAĞ ÜNİVERSİTESİ
2013-2014 EĞİTİM-ÖĞRETİM YILI
I. GRUP TEKNİK SEÇMELİ DERSLER LİSTESİ
FAKÜLTE / YÜKSEKOKUL : MÜHENDİSLİK MİMARLIK FAKÜLTESİ
BÖLÜM / PROGRAM : MAKİNE MÜHENDİSLİĞİ BÖLÜMÜ

VII.YARIYIL/GÜZ							VIII.YARIYIL BAHAR						
KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	ECTS	KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	ECTS
		T	U	L					T	U	L		
MAK4105	TRANSPORT TEKNİĞİ	3	0	0	3	5	MAK4102	MODERN İMALAT YÖNTEMLERİ	3	0	0	3	5
MAK4107	PLASTİK ŞEKİL VERME	3	0	0	3	5	MAK4106	SAYISAL DENETİMLİ TAKIM TEZGAHLARI	3	0	0	3	5
MAK4117	ENDÜSTRİYEL DÖKÜM MALZEMELERİ	3	0	0	3	5	MAK4108	İLERİ TEKNOLOJİ MALZEMELERİ	3	0	0	3	5
MAK4103	BİLGİSAYAR DESTEKLİ TASARIMA GİRİŞ	2	0	2	3	5	MAK4110	METODİK KONSTRÜKSİYON	3	0	0	3	5
MAK4115	TAKIM TEZGAHLARI	3	0	0	3	5	MAK4114	BİLGİSAYAR DESTEKLİ MÜHENDİSLİK	2	0	2	3	5
MAK4201	SOĞUTMA TEKNİĞİ	3	0	0	3	5	MAK4202	İKLİMLENDİRME ESASLARI	3	0	0	3	5
MAK4203	ÖLÇME ve MODELLEME	3	0	0	3	5	MAK4204	BUHAR KAZANLARI	3	0	0	3	5
MAK4207	GAZ TESİSATLARI	3	0	0	3	5	MAK4208	BİLGİSAYAR DESTEKLİ ISI TEKNİĞİ HESAPLAMALARI	2	0	2	3	5
MAK4209	TERMİK TURBO MAKİNELER	3	0	0	3	5	MAK4210	MERKEZİ ISITMA SİSTEMLERİ	3	0	0	3	5
MAK4213	TEKNİK TESİSAT ESASLARI	3	0	0	3	5	MAK4212	ENERJİ ÜRETİM SİSTEMLERİ	3	0	0	3	5
MAK4301	MOTORLAR	3	0	0	3	5	MAK4302	GÜÇ AKTARMA ORGANLARI	3	0	0	3	5
MAK4303	TAŞIT MEKANİĞİ	3	0	0	3	5	MAK4304	TAŞITLARDA TURBO SİSTEMLER	3	0	0	3	5
MAK4307	YAKITLAR ve YANMA	3	0	0	3	5	MAK4306	TAŞIT AEORODİNAMİĞİ	3	0	0	3	5
MAK4308	TAŞIT ELEKTRONİĞİ ve KONTROLÜ	3	0	0	3	5	MAK4310	MOTORLARDA YARDIMCI SİSTEMLER	3	0	0	3	5
MAK4309	OTOMOTİV MALZEMELERİ	3	0	0	3	5	MAK4312	MOTOR KONSTRÜKSİYON	3	0	0	3	5

ULUDAĞ ÜNİVERSİTESİ

2013-2014 EĞİTİM-ÖĞRETİM YILI

SOSYAL SEÇMELİ DERSLER LİSTESİ

FAKÜLTE / YÜKSEKOKUL : MÜHENDİSLİK MİMARLIK FAKÜLTESİ

BÖLÜM / PROGRAM : MAKİNE MÜHENDİSLİĞİ BÖLÜMÜ

KODU	DERSİN ADI	Haf.Ders Saati			Kredisi	ECTS
		T	U	L		
MAK2027	MÜHENDİSLİK ETİĞİ	2	0	0	2	3
MAK3022	İŞ GÜVENLİĞİ	2	0	0	2	3
MAK3028	PATENT ve ENDÜSTRİYEL TASARIM	2	0	0	2	3
MAK2081	READING and SPEAKING IN ENGLISH	2	0	0	2	3
MAK2084	BUSINESS ENGLISH	2	0	0	2	3

Doküman Kodu:RIT-FR-OID-12 Revizyon No:01

ULUDAĞ UNIVERSITY 2013-2014 ACADEMIC YEAR II. GROUP TECHNICAL ELECTIVE COURSES LIST													
FACULTY : ENGINEERING ARCHITECTURE							DEPARTMENT/PROGRAM : MECHANICAL ENGINEERING						
IV.TERM/FALL							V.TERM/SPRING						
CODE	COURSE	T	A	L	Cred.	ECTS	CODE	COURSE	T	A	L	Cred.	ECTS
							MAK3030	CENTRAL HEATING and VENTILATION SYSTEMS	2	0	0	2	3
							MAK3032	INTRODUCTION TO AUTOMOTIVE TECHNOLOGY	2	0	0	2	3
							MAK3034	QUALITY CONTROL	2	0	0	2	3
							MAK3038	METAL CUTTING	2	0	0	2	3
							MAK3044	MECHANICAL VIBRATIONS and ACOUSTIC	2	0	0	2	3
VII.TERM/FALL							VIII.TERM/SPRING						
CODE	COURSE	T	A	L	Cred.	ECTS	CODE	COURSE	T	A	L	Cred.	ECTS
MAK4003	ENERGY CONVERSION	2	0	0	2	3	MAK4417	ALTERNATIVE FUEL USAGE IN VEHICLES	2	0	0	2	3
MAK4005	AUTOMATIC CONTROL IN HEAT TECHNIQUE	2	0	0	2	3	MAK4008	SHEETMETAL FORMING TECHNIQUES	2	0	0	2	3
MAK4007	PRODUCTION AUTOMATION	2	0	0	2	3	MAK4014	MACHINE DESIGN and ADVANCED PROGRAMMING	2	0	0	2	3
MAK4009	HYDRAULIC POWER TRANSMISSION	2	0	0	2	3	MAK4016	FRACTURE IN ENGINEERING MATERIALS	2	0	0	2	3
MAK4013	POWDER METALLURGY	2	0	0	2	3	MAK4018	BIOMEDICAL HEAT and MASS TRANSFER	2	0	0	2	3
MAK4015	SOLAR ENERGY	2	0	0	2	3	MAK4022	ELECTRO-HYDRAULIC CONTROL SYSTEMS	2	0	0	2	3
MAK4017	MACHINE DESIGN and VISUAL PROGRAMMING	2	0	0	2	3	MAK4024	CONVEYORS	2	0	0	2	3
MAK4019	COOLING OF ELECTRONIC SYSTEMS	2	0	0	2	3	MAK4026	FIRE INSTALLATION and FIRE PROTECTION	2	0	0	2	3
MAK4048	ENERGY CONSERVATIONS IN INDUSTRY	2	0	0	2	3	MAK4030	INDUSTRIAL CONTROL SYSTEMS and MEASUREMENT	2	0	0	2	3
MAK4023	HYBRID VEHICLES	2	0	0	2	3	MAK4036	VEHICLE EXHAUST EMISSION & ITS CONTROL	2	0	0	2	3
MAK4029	CERAMIC MATERIALS	2	0	0	2	3	MAK4038	WELDING TECHNOLOGY	2	0	0	2	3
MAK4033	RENEWABLE ENERGY SOURCES	2	0	0	2	3	MAK4040	HEAT ECONOMY	2	0	0	2	3
MAK4035	CORROSION and CORROSION CONTROL	2	0	0	2	3	MAK4067	HEAT PUMP	2	0	0	2	3
MAK4041	NEW TECHNOLOGIES IN AUTOMOTIVE INDUSTRY	2	0	0	2	3	MAK4044	THERMAL FLOW DYNAMICS	2	0	0	2	3
MAK4045	PNEUMATIC POWER TRANSMISSION	2	0	0	2	3	MAK4021	HEAT EXCHANGERS	2	0	0	2	3
MAK4075	VEHICLE ELECTRICITY	2	0	0	2	3	MAK4060	DESIGN FOR MANUFACTURABILITY and ASSEMBLY	2	0	0	2	3
MAK4077	CONVENTIONAL POWER TRANSMISSION SYSTEMS	2	0	0	2	3	MAK4068	SANITARY INSTALLATIONS	2	0	0	2	3
MAK4079	FACTORY ORGANIZATION	2	0	0	2	3	MAK4071	MECHANICAL DRIVE ELEMENTS	2	0	0	2	3
MAK4083	ANALYSIS and SOLVE WITH SOFTWARE	2	0	0	2	3	MAK4094	MEASUREMENT TECHNIQUES and ANALYSIS	2	0	0	2	3
MAK4089	INTRODUCTION TO MECHATRONIC	2	0	0	2	3	MAK4099	ELECTROPNEUMATIC AUTOMATION SYSTEMS	2	0	0	2	3
MAK4091	ERGONOMICS	2	0	0	2	3	MAK4410	ROBOT DYNAMICS and CONTROL	2	0	0	2	3
MAK4081	INTRODUCTION TO ROBOTICS	2	0	0	2	3	MAK4411	DESIGN and DYNAMICS OF MECHATRONIC SYSTEMS	2	0	0	2	3
MAK4051	FUNDAMENTAL MECHANICS OF FLUIDS	2	0	0	2	3	MAK4412	GENERAL METROLOGY	2	0	0	2	3
MAK4055	PROFESSIONAL ENGLISH I	2	0	0	2	3	MAK4053	RECENT ADVANCES IN MATERIALS SCIENCE	2	0	0	2	3
MAK4052	INDUSTRIAL ENERGY CONSERVATION	2	0	0	2	3	MAK4056	PROFESSIONAL ENGLISH II	2	0	0	2	3
MAK4413	RELIABILITY IN ENGINEERING DESIGN	2	0	0	2	3	MAK4054	EXPERIMENTAL METHODS FOR ENGINEERS	2	0	0	2	3
MAK4414	SUSTANIABLE PRODUCT DESIGN	2	0	0	2	3	MAK4415	TOTAL PRODUCTIVE MAINTENANCE	2	0	0	2	3
MAK4419	NONDESTRUCTIVE EVALUATION METHODS	2	0	0	2	3	MAK4416	MICRO SYSTEMS	2	0	0	2	3
							MAK4418	FAILURE ANALYSIS	2	0	0	2	3
							MAK4420	PLASTICS	2	0	0	2	3
							MAK4095	ENGINEERING ECONOMICS	2	0	0	2	3

ULUDAG UNIVERSITY													
2013-2014 ACADEMIC YEAR													
I. GROUP TECHNICAL ELECTIVE COURSES LIST													
FACULTY		:ENGINEERING ARCHITECTURE											
DEPARTMENT/PROGRAM		:MECHANICAL ENGINEERING											
VII.TERM/FALL							VIII.TERM/SPRING						
CODE	COURSE	T	A	L	Cred.	ECTS	CODE	COURSE	T	A	L	Cred.	ECTS
MAK4105	TRANSPORT TECHNIQUE	3	0	0	3	5	MAK4102	MODERN MANUFACTURING METHODS	3	0	0	3	5
MAK4107	PLASTIC FORMING OF METATERIALS	3	0	0	3	5	MAK4106	CNC MACHINE TOOLS	3	0	0	3	5
MAK4117	INDUSTRIAL CASTING MATERIALS	3	0	0	3	5	MAK4108	ADVANCED MATERIALS	3	0	0	3	5
MAK4103	INTRODUCTION TO COMPUTER AIDED DESIGN	2	0	2	3	5	MAK4110	METHODICAL DESIGN	3	0	0	3	5
MAK4115	MACHINE TOOLS	3	0	0	3	5	MAK4114	COMPUTER AIDED ENGINEERING	2	0	2	3	5
MAK4201	REFRIGERATION TECHNIQUE	3	0	0	3	5	MAK4202	FUNDAMENTALS OF AIR CONDITIONING	3	0	0	3	5
MAK4203	MEASUREMENT AND MODELLING	3	0	0	3	5	MAK4204	STEAM BOILERS	3	0	0	3	5
MAK4207	GAS INSTALLATIONS	3	0	0	3	5	MAK4208	COM. AIDED HEAT TECH.CALCULATIONS	2	0	2	3	5
MAK4209	THERMAL TURBOMACHINERY	3	0	0	3	5	MAK4210	DISTRICT HEATING SYSTEMS	3	0	0	3	5
MAK4213	FUNDAMENTALS OF TECHNICAL INSTALLATION	3	0	0	3	5	MAK4212	ENERGY PRODUCTION SYSTEMS	3	0	0	3	5
MAK4301	INTERNAL COMBUSTION ENGINES	3	0	0	3	5	MAK4302	POWER TRANSMISSION	3	0	0	3	5
MAK4303	VEHICLE MECHANICS	3	0	0	3	5	MAK4304	TURBO SYSTEMS IN VEHICLES	3	0	0	3	5
MAK4308	VEHICLE ELECTRONICS AND CONTROL	3	0	0	3	5	MAK4306	VEHICLE AERODYNAMICS	3	0	0	3	5
MAK4307	FUELS AND COMBUSTION	3	0	0	3	5	MAK4310	SUPPLEMENTARY SYSTEMS IN ENGINES	3	0	0	3	5
MAK4309	AUTOMOTIVE MATERIALS	3	0	0	3	5	MAK4312	INTERNAL COMBUSTION ENGINE DESIGN	3	0	0	3	5

ULUDAG UNIVERSITY
2013-2014 ACADEMIC YEAR
SOCIAL ELECTIVE COURSES LIST

FACULTY :ENGINEERING ARCHITECTURE
DEPARTMENT/PROGRAM :MECHANICAL ENGINEERING

CODE	COURSE	T	A	L	Cred.	ECTS
MAK2027	ENGINEERING ETHICS	2	0	0	2	2
MAK3022	SAFETY ENGINEERING	2	0	0	2	2
MAK3028	PATENT AND INDUSTRIAL DESIGN	2	0	0	2	2
MAK2081	READING AND SPEAKING IN ENGLISH	2	0	0	2	2
MAK2084	BUSINESS ENGLISH	2	0	0	2	2

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