



BURSA ULUDAĞ ÜNİVERSİTESİ
FEN BİLİMLERİ ENSTİTÜSÜ
2022-2023 EĞİTİM ÖĞRETİM YILI DERS PLANLARI

FR 1.1.1_02

ANABİLİM/ ANASANAT DALI HİBRİD VE ELEKTRİKLİ TAŞITLAR

BİLİM/ SANAT DALI /
PROGRAMI Yüksek Lisans Programı

DERS AŞAMASI	I. YARIYIL / GÜZ								II. YARIYIL / BAHAR							
	Kodu	Dersin Adı	Türü	T	U	L	Kredi	AKTS	Kodu	Dersin Adı	Türü	T	U	L	Kredi	AKTS
	OHE5191	TEZ DANIŞMANLIĞI I	Z	0	1	0	0	1	OHE5192	TEZ DANIŞMANLIĞI II	Z	0	1	0	0	1
	OHE5181	YÜKSEK LİSANS UZMANLIK ALAN DERSİ I	Z	4	0	0	0	5	OHE5182	YÜKSEK LİSANS UZMANLIK ALAN DERSİ II	Z	4	0	0	0	5
	OHE	SEÇMELİ DERS	S				3	6	OHE5172	SEMİNER	Z	0	2	0	0	4
	OHE	SEÇMELİ DERS	S				3	6	FEN5000	ARAŞTIRMA TEKNİKLERİ VE YAYIN ETİĞİ	Z	2	0	0	2	2
	OHE	SEÇMELİ DERS	S				3	6	OHE	SEÇMELİ DERS	S				3	6
	OHE	SEÇMELİ DERS	S				3	6	OHE	SEÇMELİ DERS	S				3	6
		SEÇMELİ DERS *	S				3	6	OHE	SEÇMELİ DERS	S				3	6
										SEÇMELİ DERS *	S				3	6
	OHE5001	ELEKTRİK MOTORLARI VE SÜRÜCÜLER	S	3	0	0	3	6	OHE5004	ELEKTRİKLİ, HİBRİD VE YAKIT PİLLİ TAŞIT TEKNOLOJİLERİ	S	3	0	0	3	6
	OHE5003	HİBRİD VE ELEKTRİKLİ TAŞITLARDA BATARYA ISIL YÖNETİMİ VE MODELLENMESİ	S	3	0	0	3	6	OHE5006	HİBRİD VE ELEKTRİKLİ TAŞITLARDA AKIŞ VE ISI TRANSFERİ UYGULAMALARI	S	3	0	0	3	6
	OHE5005	ELEKTRİKLİ VE İÇTEN YANMALI MOTORLARIN TAŞITA UYGULANMASI	S	3	0	0	3	6	OHE5008	HİBRİD VE ELEKTRİKLİ TAŞITLARDA ELEKTROMANYETİK UYUMLULUK	S	3	0	0	3	6
	OHE5007	HİBRİD VE ELEKTRİKLİ TAŞITLARDA OPTİK FİBERLİ SENSÖR UYGULAMALARI	S	3	0	0	3	6	OHE5010	HİBRİD VE ELEKTRİKLİ TAŞITLARDA SİSTEM MODELLEME VE BENZETİM	S	3	0	0	3	6
	OHE5009	HİBRİD VE ELEKTRİKLİ TAŞITLARDA ECU- ECM YAPISI VE ÇALIŞMA ALGORİTMASI	S	3	0	0	3	6	OHE5012	HİBRİD VE ELEKTRİKLİ TAŞITLARDA MEKANİK SİSTEMLERİN SİMÜLASYONU	S	3	0	0	3	6
	OHE5011	HİBRİD VE ELEKTRİK TAŞITLARDA OPTOELEKTRONİK AYGIT TEKNOLOJİLERİ	S	3	0	0	3	6	OHE5014	HİBRİD VE ELEKTRİKLİ TAŞITLARDA BATARYA KONTROL SİSTEMLERİ	S	3	0	0	3	6
	OHE5013	HİBRİD VE ELEKTRİKLİ TAŞITLARDA HABERLEŞME PROTOKOLLERİ	S	3	0	0	3	6	OHE5016	HİBRİD VE ELEKTRİKLİ TAŞITLARDA GÖSTERGE VE SİNYALİZASYON SİSTEMLERİ	S	3	0	0	3	6
	OHE5015	PİLLER VE ELEKTROKİMYASAL TEMELLERİ	S	3	0	0	3	6	OHE5018	HİBRİD VE ELEKTRİKLİ TAŞITLARDA LİDAR VE RADAR SİSTEMLERİ	S	3	0	0	3	6
	OHE 5017	PEM YAKIT PİLLERİNİN MODELLENMESİ VE KONTROLÜ	S	3	0	0	3	6	OHE5020	HİBRİD VE ELEKTRİKLİ TAŞITLARDA GÜÇ ELEKTRONİĞİ	S	3	0	0	3	6
	OHE5019	GÖRME TABANLI KONTROL	S	3	0	0	3	6	OTO5102	OTOMOTİV MÜHENDİSLİĞİNDE NUMERİK ANALİZ VE OPTİMİZASYON YÖNTEMLERİ	S	3	0	0	3	6
	OTO5123	TAŞITLARDA ELEKTRİK VE ELEKTRONİK SİSTEMLER	S	3	0	0	3	6	OTO5128	OTOMOTİV MÜHENDİSLİĞİNDE SONLU ELEMENLAR UYGULAMALARI	S	3	0	0	3	6

	OTO5137	SONLU ELEMANLAR ANALİZİNİN ESASLARI	S	3	0	0	3	6		OTO5144	TAŞITLARDA GÖMÜLÜ KONTROL SİSTEMLERİ	S	3	0	0	3	6		
	OTO5143	TAŞITLARDA SENSÖR VE EYLEYİCİLER	S	3	0	0	3	6		OHE5024	OTONOM ARAÇLAR İÇİN YAPAY ZEKA	S	3	0	0	3	6		
	OTO5145	TAŞITLARDA BÜTÜNLEŞİK TANI KOYMA SİSTEMLERİ	S	3	0	0	3	6											
	OHE5021	OTONOM ARAÇLAR İÇİN YAZILIM TASARIMI VE GELİŞTİRİLMESİ	S	3	0	0	3	6											
	Toplam Kredi/AKTS							12	30		Toplam Kredi/AKTS							11	30
TEZ AŞAMASI	III. YARIYIL / GÜZ								IV. YARIYIL / BAHAR										
	OHE5183	YÜKSEK LİSANS UZMANLIK ALAN DERSİ III	Z	4	0	0	0	5	OHE5184	YÜKSEK LİSANS UZMANLIK ALAN DERSİ IV	Z	4	0	0	0	5			
	OHE5193	TEZ DANIŞMANLIĞI III	Z	0	1	0	0	25	OHE5194	TEZ DANIŞMANLIĞI IV	Z	0	1	0	0	25			
	Toplam Kredi/AKTS							0	30	Toplam Kredi/AKTS							0	30	
TOPLAM KREDİ: 23 - TOPLAM AKTS: 120																			



BURSA ULUDAĞ UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
2022-2023 ACADEMIC YEAR COURSE PLAN

FR 1.1.1_02

DEPARTMENT OF

HYBRID AND ELECTRIC VEHICLES

DEPARTMENT / PROGRAM

Master's Degree Program

COURSE STAGE	I. TERM / FALL								II. TERM / SPRING							
	Code	Course Title	Type	T	U	L	Credit	ECTS	Code	Course Title	Type	T	U	L	Credit	ECTS
	OHE5191	MA THESIS CONSULTING I	C	0	1	0	0	1	OHE5192	MA THESIS CONSULTING II	C	0	1	0	0	1
	OHE5181	ADVANCED TOPICS IN MA THESIS I	C	4	0	0	0	5	OHE5182	ADVANCED TOPICS IN MA THESIS II	C	4	0	0	0	5
	OHE	ELECTIVE COURSE	E				3	6	OHE5172	SEMINAR	C	0	2	0	0	4
	OHE	ELECTIVE COURSE	E				3	6	FEN5000	RESEARCH TECHNIQUES and PUBLICATION ETHICS in AUTOMOTIVE ENGINEERING	C	2	0	0	2	2
	OHE	ELECTIVE COURSE	E				3	6	OHE	ELECTIVE COURSE	E				3	6
	OHE	ELECTIVE COURSE	E				3	6	OHE	ELECTIVE COURSE	E				3	6
		ELECTIVE COURSE *	E				3	6	OHE	ELECTIVE COURSE	E				3	6
										ELECTIVE COURSE *	E				3	6
	OHE5001	ELECTRIC MOTORS AND DRIVES	S	3	0	0	3	6	OHE5004	ELECTRIC, HYBRID AND FUEL CELL VEHICLE TECHNOLOGIES	S	3	0	0	3	6
	OHE5003	BATTERY THERMAL MANAGEMENT AND MODELLING IN HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6	OHE5006	THE FLOW AND HEAT TRANSFER APPLICATIONS IN HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6
	OHE5005	APPLICATION OF ELECTRIC AND INTERNAL COMBUSTION ENGINES ON VEHICLE	S	3	0	0	3	6	OHE5008	ELECTROMAGNETIC COMPATIBILITY FOR HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6
	OHE5007	OPTICAL FIBER SENSOR APPLICATIONS FOR HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6	OHE5010	SYSTEM MODELING AND SIMULATION IN HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	
	OHE5009	ECU-ECM STRUCTURE AND WORKING ALGORITHM IN HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6	OHE5012	SIMULATION OF MECHANICAL SYSTEMS IN HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6
	OHE5011	OPTOELECTRONIC DEVICE TECHNOLOGIES FOR HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6	OHE5014	BATTERY CONTROL SYSTEMS IN HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6
	OHE5013	COMMUNICATION PROTOCOLS FOR HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6	OHE5016	INDICATOR AND SIGNALIZATION SYSTEMS IN HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6
	OHE5015	BATTERIES AND ELECTROCHEMICAL FUNDAMENTALS	S	3	0	0	3	6	OHE5018	LIDAR AND RADAR SYSTEMS FOR HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6
	OHE 5017	MODELING AND CONTROL OF PEM FUEL CELL	S	3	0	0	3	6	OHE5020	POWER ELECTRONICS FOR HYBRID AND ELECTRIC VEHICLES	S	3	0	0	3	6
	OHE5019	VISION-BASED CONTROL	S	3	0	0	3	6	OTO5102	NUMERICAL ANALYSIS AND OPTIMIZATION	S	3	0	0	3	6

	OTO5123	ELECTRIC AND ELECTRONIC SYSTEMS FOR VEHICLES	S	3	0	0	3	6	OTO5128	METHODS IN AUTOMOTIVE ENGINEERING									
	OTO5137	FUNDAMENTALS OF FINITE ELEMENT ANALYSIS	S	3	0	0	3	6	OTO5144	FINITE ELEMENT APPLICATIONS IN AUTOMOTIVE ENGINEERING	S	3	0	0	3	6			
	OTO5143	SENSORS AND ACTUATORS IN VEHICLES	S	3	0	0	3	6		EMBEDDED CONTROL SYSTEMS IN VEHICLES	S	3	0	0	3	6			
	OTO5145	ON-BOARD DIAGNOSTIC SYSTEMS IN VEHICLES	S	3	0	0	3	6	OHE5024	ARTIFICIAL INTELLIGENCE FOR AUTONOMOUS VEHICLES	S	3	0	0	3	6			
	OHE5021	SOFTWARE DESIGN AND DEVELOPMENT FOR AUTONOMOUS VEHICLES	S	3	0	0	3	6											
Total Credits/ECTS								12	30	Total Credits/ECTS								11	30
STAGE THESIS	III. TERM / FALL								IV. TERM / SPRING										
	OHE5183	ADVANCED TOPICS IN MA THESIS III	C	4	0	0	0	5	OHE5184	ADVANCED TOPICS IN MA THESIS IV	C	4	0	0	0	5			
	OHE5193	MA THESIS CONSULTING III	C	0	1	0	0	25	OHE5194	MA THESIS CONSULTING IV	C	0	1	0	0	25			
	Total Credits/ECTS								0	30	Total Credits/ECTS								0
TOTAL CREDITS: 23 - TOTAL ECTS: 120																			