|  |
| --- |
|  |

|  |  |
| --- | --- |
|  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ ENSTİTÜSÜ**  **2022-2023 EĞİTİM ÖĞRETİM YILI DERS PLANLARI** | | | | | | | | | | | | **FR 1.1.1\_02** | | | |
| **ANABİLİM/ ANASANAT DALI** | | | | OTOMOTİV MÜHENDİSLİĞİ | | | | | | | | | | | | | | |
| **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** |
| OTO5191 | TEZ DANIŞMANLIĞI I | | | Z | 0 | 1 | 0 | 0 | 1 | OTO5192 | TEZ DANIŞMANLIĞI II | Z | 0 | 1 | 0 | 0 | 5 |
| OTO5181 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ I | | | Z | 4 | 0 | 0 | 0 | 5 | OTO5182 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ II | Z | 4 | 0 | 0 | 0 | 5 |
| OTO5119 | TAŞIT TRANSMİSYON SİSTEMLERİ TASARIMI | | | S | 3 | 0 | 0 | 3 | 6 | FEN5000 | ARAŞTIRMA TEKNİKLERİ VE YAYIN ETİĞİ | Z | 2 | 0 | 0 | 2 | 2 |
| OTO5121 | GÖVDE TASARIM VE FORM GELİŞTİRME | | | S | 3 | 0 | 0 | 3 | 6 | OTO5102 | OTOMOTİV MÜHENDİSLİĞİNDE NUMERİK ANALİZ VE OPTİMİZASYON YÖNTEMLERİ | Z | 3 | 0 | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | OTO5172 | SEMİNER | Z | 0 | 2 | 0 | 0 | 4 |
| OTO5123 | TAŞITLARDA ELEKTRİK VE ELEKTRONİK SİSTEMLER | | | S | 3 | 0 | 0 | 3 | 6 | OTO5114 | ALTERNATİF TAHRİK SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5129 | MOTORLARDA KARIŞIM OLUŞUM TEKNİKLERİ | | | S | 3 | 0 | 0 | 3 | 6 | OTO5120 | ÜRETİM VE MONTAJ TEKNOLOJİLERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5131 | İÇTEN YANMALI MOTORLAR | | | S | 3 | 0 | 0 | 3 | 6 | OTO5124 | MOTOR TASARIM VE KONTROL TEMELLERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5133 | İÇTEN YANMALI MOTORUN TAŞITA UYGULANMASI | | | S | 3 | 0 | 0 | 3 | 6 | OTO5128 | OTOMOTİV MÜHENDİSLİĞİNDE SONLU ELEMANLAR UYGULAMALARI | S | 3 | 0 | 0 | 3 | 6 |
| OTO5135 | TAŞITLARDA TİTREŞİM VE GÜRÜLTÜ | | | S | 3 | 0 | 0 | 3 | 6 | OTO5130 | TAŞIT İÇ TASARIMI | S | 3 | 0 | 0 | 3 | 6 |
| OTO5137 | SONLU ELEMANLAR ANALİZİNİN ESASLARI | | | S | 3 | 0 | 0 | 3 | 6 | OTO5134 | AERODİNAMİK MODELLEME ESASLARI | S | 3 | 0 | 0 | 3 | 6 |
| OTO5141 | TAŞIT İKLİMLENDİRME SİSTEMLERİ VE ISIL KONFOR | | | S | 3 | 0 | 0 | 3 | 6 | OTO5136 | İÇTEN YANMALI MOTORLARDA ÖZEL KONULAR | S | 3 | 0 | 0 | 3 | 6 |
| OTO5143 | TAŞITLARDA SENSÖR VE EYLEYİCİLER | | | S | 3 | 0 | 0 | 3 | 6 | OTO5140 | TAŞITLARDA İLERİ ÜRETİM TEKNOLOJİLERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5145 | TAŞITLARDA BÜTÜNLEŞİK TANI KOYMA SİSTEMLERİ | | | S | 3 | 0 | 0 | 3 | 6 | OTO5142 | OTOMOTİV ELEKTRONİĞİNDE ARA YÜZ DEVRELERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5147 | OTOMOTİVDE MÜHENDİSLİK SİSTEMLERİNİN MODELLENMESİ | | | S | 3 | 0 | 0 | 3 | 6 | OTO5144 | TAŞITLARDA GÖMÜLÜ KONTROL SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5149 | TAŞITLARDA POLİMERLERİN KULLANIMI | | | S | 3 | 0 | 0 | 3 | 6 | OTO5146 | İÇTEN YANMALI MOTOR TESTLERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5153 | İLERİ MUKAVEMET | | | S | 3 | 0 | 0 | 3 | 6 | OTO5148 | OTOMOTİVDE TRİBOLOJİK SİSTEMLER | S | 3 | 0 | 0 | 3 | 6 |
| OTO5155 | OTOMOTİV MÜHENDİSLİĞİNDE YAPAY ZEKA UYGULAMALARI | | | S | 3 | 0 | 0 | 3 | 6 | OTO5150 | OTOMOTİVDE AKIŞKAN DENETİM SİSTEMLERİ VE UYGULAMALARI | S | 3 | 0 | 0 | 3 | 6 |
| OTO5157 | OTOMOTİV MÜHENDİSLİĞİNDE YAPISAL TASARIM VE OPTİMİZASYON | | | S | 3 | 0 | 0 | 3 | 6 | OTO5152 | TAŞIT SÜSPANSİYON SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5159 | SİSTEM MODELLEME VE BENZETİM | | | S | 3 | 0 | 0 | 3 | 6 | OTO5154 | OTOMOTİV MÜHENDİSLİĞİNDE BİLGİSAYAR DESTEKLİ SİMÜLASYON | S | 3 | 0 | 0 | 3 | 6 |
| OTO5161 | MEKANİK SİTEMLERİN BİLGİSAYAR DESTEKLİ ANALİZİ | | | S | 3 | 0 | 0 | 3 | 6 | OTO5156 | TAŞIT TASARIMI VE İMALATINDA ÖZEL KONULAR | S | 3 | 0 | 0 | 3 | 6 |
| OTO5163 | İLERİ TAŞIT TEKNOLOJİLERİ | | | S | 3 | 0 | 0 | 3 | 6 | OTO5158 | GÜVENİLİRLİK TEMELLİ TASARIM | S | 3 | 0 | 0 | 3 | 6 |
| OTO5165 | TAŞIT TASARIM ESASLARI | | | S | 3 | 0 | 0 | 3 | 6 | OTO5160 | TAŞIT EMİSYONLARI VE KONTROL SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5167 | OTOMOTİV MÜHENDİSLİĞİNDE MALZEME SEÇİMİ | | | S | 3 | 0 | 0 | 3 | 6 | OTO5162 | İLERİ TAŞIT DİNAMİĞİ | S | 3 | 0 | 0 | 3 | 6 |
| OTO5169 | MEKANİK TİTREŞİMLERDE TEORİK VE DENEYSEL YÖNTEMLER | | | S | 3 | 0 | 0 | 3 | 6 | OTO5164 | TAŞITLARDA AYRIK ZAMANLI DENETİM SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | OTO5166 | ELEKTRİKLİ VE HİBRİD ARAÇLARIN TASARIM ESASLARI | S | 3 | 0 | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | OTO5168 | EKLEMELİ İMALAT TEKNOLOJİLERİ | S | 3 | 0 | 0 | 3 | 6 |
| **Toplam Kredi/AKTS** | | | | | | | | **12** | **30** | **Toplam Kredi/AKTS** | | | | | | **11** | **30** |
| **TEZ AŞAMASI** | **III. YARIYIL / GÜZ** | | | | | | | | | | **IV. YARIYIL / BAHAR** | | | | | | | |
| OTO5183 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ III | | | Z | 4 | 0 | 0 | 0 | 5 | OTO5184 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ IV | Z | 4 | 0 | 0 | 0 | 5 |
| OTO5193 | TEZ DANIŞMANLIĞI III | | | Z | 0 | 1 | 0 | 0 | 25 | OTO5194 | 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** | | | | | AUTOMOTIVE ENGINEERING | | | | | | | | | | | | | | | | |
| **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** |
| OTO5191 | MA THESIS CONSULTING I | | | C | 0 | 1 | 0 | 0 | 1 | | OTO5192 | MA THESIS CONSULTING II | C | 0 | 1 | | 0 | 0 | 5 |
| OTO5181 | ADVANCED TOPICS IN MA THESIS I | | | C | 4 | 0 | 0 | 0 | 5 | | OTO5182 | ADVANCED TOPICS IN MA THESIS II | C | 4 | 0 | | 0 | 0 | 5 |
| OTO5119 | AUTOMOTIVE TRANSMISSION DESIGN | | | E | 3 | 0 | 0 | 3 | 6 | | FEN5000 | RESEARCH TECHNIQUES AND PUBLICATION ETHICS IN AUTOMOTIVE ENGINEERING | C | 2 | 0 | | 0 | 2 | 2 |
| OTO5121 | DEVELOPING FORMS AND DESIGNING THE BODY WORK | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5302 | STATISTICS FOR ENVIRONMENTAL ENGINEERS | C | 3 | 0 | | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | | OTO5172 | SEMINAR | C | 0 | 2 | | 0 | 0 | 4 |
| OTO5123 | ELECTRIC AND ELECTRONIC SYSTEMS FOR VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5114 | ALTERNATIVE PROPULSION SYSTEMS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5129 | MIXTURE FORMATION IN INTERNAL COMBUSTION ENGINES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5120 | PRODUCTION AND ASSEMBLY TECHNOLOGIES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5131 | INTERNAL COMBUSTION ENGINES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5124 | ENGINE DESIGN AND CONTROL FUNDAMENTALS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5133 | APPLICATION OF INTERNAL COMBUSTION ENGINES ON VEHICLE | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5128 | FINITE ELEMENT APPLICATIONS IN AUTOMOTIVE ENGINEERING | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5135 | VIBRATION AND NOISE IN VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5130 | VEHICLE INTERIOR DESIGN | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5137 | FUNDAMENTALS OF FINITE ELEMENT ANALYSIS | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5134 | AERODYNAMIC MODELLING FUNDAMENTALS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5141 | VEHICLE HVAC SYSTEMS AND THERMAL COMFORT | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5136 | ADVANCED TOPICS IN INTERNAL COMBUSTION ENGINES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5143 | SENSORS AND ACTUATORS IN VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5140 | ADVANCED MANUFACTURING TECHNIQUES FOR VEHICLES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5145 | ON-BOARD DIAGNOSTIC SYSTEMS IN VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5142 | INTERFACE CIRCUITS IN AUTOMOTIVE ELECTRONICS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5147 | MODELLING OF ENGINEERING SYSTEMS IN AUTOMOTIVE | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5144 | EMBEDDED CONTROL SYSTEMS IN VEHICLES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5149 | USE OF POLYMERS IN VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5146 | INTERNAL COMBUSTION ENGINE TESTS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5153 | ADVANCED STRENGTH OF MATERIALS | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5148 | TRIBOLOGICAL SYSTEMS IN AUTOMOTIVE | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5155 | APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN AUTOMOTIVE ENGINEERING | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5150 | FLUID CONTROL SYSTEMS AND APPLICATION IN VEHICLES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5157 | STRUCTURAL DESIGN AND OPTIMIZATION IN AUTOMOTIVE ENGINEERING | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5152 | VEHICLE SUSPENSION SYSTEMS DESIGN | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5159 | SYSTEM MODELING AND SIMULATION | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5154 | COMPUTER AIDED SIMULATION IN AUTOMOTİVE ENGİNEERİNG | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5161 | COMPUTER AIDED ANALYSIS OF MECHANICAL SYSTEM | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5156 | SPECIAL TOPICS IN VEHICLE DESIGN AND MANUFACTURING | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5163 | ADVANCE VEHICLE TECHNOLOGIES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5158 | RELIABILITY BASED DESIGN | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5165 | VEHICLE DESIGN PRINCIPLES | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5160 | VEHICLE OUT EMISSIONS AND THEIR CONTROL | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5167 | MATERIAL SELECTION IN AUTOMOTIVE ENGINEERING | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5162 | ADVANCED VEHICLE DYNAMICS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5169 | THEORETICAL AND EXPERIMENTAL METHODS IN MECHANICAL VIBRATIONS | | | E | 3 | 0 | 0 | 3 | 6 | | OTO5164 | VEHICLE DISCRETE-TIME CONTROL SYSTEMS | E | 3 | 0 | | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | | OTO5166 | DESIGN PRINCIPLES of HYBRID AND ELECTRIC VEHICLES | E | 3 | 0 | | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | | OTO5168 | ADDITIVE MANUFACTURING TECHNOLOGIES | E | 3 | 0 | | 0 | 3 | 6 |
| **Total Credits/ECTS** | | | | | | | | **12** | **30** | | **Total Credits/ECTS** | | | | | | | **11** | **30** |
| **STAGE THESIS** | | **III. TERM / FALL** | | | | | | | | | | | **IV. TERM / SPRING** | | | | | | | | |
| OTO5183 | ADVANCED TOPICS IN MA THESIS III | | | C | 4 | 0 | 0 | 0 | 5 | | OTO5184 | ADVANCED TOPICS IN MA THESIS IV | C | 4 | 0 | | 0 | 0 | 5 |
| OTO5193 | MA THESIS CONSULTING III | | | C | 0 | 1 | 0 | 0 | 25 | | OTO5194 | MA THESIS CONSULTING IV | C | 0 | 1 | | 0 | 0 | 25 |
| **Total Credits/ECTS** | | | | | | | | **0** | **30** | | **Total Credits/ECTS** | | | | | | | **0** | **30** |
| **TOTAL CREDITS: 23 - TOTAL ECTS: 120** | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | |  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ ENSTİTÜSÜ**  **2022-2023 EĞİTİM ÖĞRETİM YILI DERS PLANLARI** | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | |
| **ANABİLİM/ ANASANAT DALI** | | | | | OTOMOTİV MÜHENDİSLİĞİ | | | | | | | | | | | | | | | | |
| **BİLİM/ SANAT DALI / PROGRAMI** | | | | | Yüksek Lisans Programı (İkinci Öğretim) | | | | | | | | | | | | | | | | |
| **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** | |
| OTO5191 | TEZ DANIŞMANLIĞI I | | | Z | 0 | 1 | 0 | 0 | 1 | | OTO5192 | TEZ DANIŞMANLIĞI II | Z | 0 | 1 | 0 | 0 | 5 | |
| OTO5181 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ I | | | Z | 4 | 0 | 0 | 0 | 5 | | OTO5182 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ II | Z | 4 | 0 | 0 | 0 | 5 | |
| OTO5119 | TAŞIT TRANSMİSYON SİSTEMLERİ TASARIMI | | | S | 3 | 0 | 0 | 3 | 6 | | FEN5000 | OTOMOTİV MÜHENDİSLİĞİNDE ARAŞTIRMA TEKNİKLERİ VE YAYIN ETİĞİ | Z | 2 | 0 | 0 | 2 | 2 | |
| OTO5121 | GÖVDE TASARIM VE FORM GELİŞTİRME | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5102 | OTOMOTİV MÜHENDİSLİĞİNDE NUMERİK ANALİZ VE OPTİMİZASYON YÖNTEMLERİ | Z | 3 | 0 | 0 | 3 | 6 | |
|  |  | | |  |  |  |  |  |  | | OTO5172 | SEMİNER | Z | 0 | 2 | 0 | 0 | 4 | |
| OTO5123 | TAŞITLARDA ELEKTRİK VE ELEKTRONİK SİSTEMLER | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5114 | ALTERNATİF TAHRİK SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5129 | MOTORLARDA KARIŞIM OLUŞUM TEKNİKLERİ | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5120 | ÜRETİM VE MONTAJ TEKNOLOJİLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5131 | İÇTEN YANMALI MOTORLAR | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5124 | MOTOR TASARIM VE KONTROL TEMELLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5133 | İÇTEN YANMALI MOTORUN TAŞITA UYGULANMASI | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5128 | OTOMOTİV MÜHENDİSLİĞİNDE SONLU ELEMANLAR UYGULAMALARI | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5135 | TAŞITLARDA TİTREŞİM VE GÜRÜLTÜ | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5130 | TAŞIT İÇ TASARIMI | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5137 | SONLU ELEMANLAR ANALİZİNİN ESASLARI | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5134 | AERODİNAMİK MODELLEME ESASLARI | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5141 | TAŞIT İKLİMLENDİRME SİSTEMLERİ VE ISIL KONFOR | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5136 | İÇTEN YANMALI MOTORLARDA ÖZEL KONULAR | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5143 | TAŞITLARDA SENSÖR VE EYLEYİCİLER | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5140 | TAŞITLARDA İLERİ ÜRETİM TEKNOLOJİLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5145 | TAŞITLARDA BÜTÜNLEŞİK TANI KOYMA SİSTEMLERİ | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5142 | OTOMOTİV ELEKTRONİĞİNDE ARA YÜZ DEVRELERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5147 | OTOMOTİVDE MÜHENDİSLİK SİSTEMLERİNİN MODELLENMESİ | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5144 | TAŞITLARDA GÖMÜLÜ KONTROL SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5149 | TAŞITLARDA POLİMERLERİN KULLANIMI | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5146 | İÇTEN YANMALI MOTOR TESTLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5153 | İLERİ MUKAVEMET | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5148 | OTOMOTİVDE TRİBOLOJİK SİSTEMLER | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5155 | OTOMOTİV MÜHENDİSLİĞİNDE YAPAY ZEKA UYGULAMALARI | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5150 | OTOMOTİVDE AKIŞKAN DENETİM SİSTEMLERİ VE UYGULAMALARI | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5157 | OTOMOTİV MÜHENDİSLİĞİNDE YAPISAL TASARIM VE OPTİMİZASYON | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5152 | TAŞIT SÜSPANSİYON SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5159 | SİSTEM MODELLEME VE BENZETİM | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5154 | OTOMOTİV MÜHENDİSLİĞİNDE BİLGİSAYAR DESTEKLİ SİMÜLASYON | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5161 | MEKANİK SİTEMLERİN BİLGİSAYAR DESTEKLİ ANALİZİ | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5156 | TAŞIT TASARIMI VE İMALATINDA ÖZEL KONULAR | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5163 | İLERİ TAŞIT TEKNOLOJİLERİ | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5158 | GÜVENİLİRLİK TEMELLİ TASARIM | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5165 | TAŞIT TASARIM ESASLARI | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5160 | TAŞIT EMİSYONLARI VE KONTROL SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5167 | OTOMOTİV MÜHENDİSLİĞİNDE MALZEME SEÇİMİ | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5162 | İLERİ TAŞIT DİNAMİĞİ | S | 3 | 0 | 0 | 3 | 6 | |
| OTO5169 | MEKANİK TİTREŞİMLERDE TEORİK VE DENEYSEL YÖNTEMLER | | | S | 3 | 0 | 0 | 3 | 6 | | OTO5164 | TAŞITLARDA AYRIK ZAMANLI DENETİM SİSTEMLERİ | S | 3 | 0 | 0 | 3 | 6 | |
|  |  | | |  |  |  |  |  |  | | OTO5166 | ELEKTRİKLİ VE HİBRİD ARAÇLARIN TASARIM ESASLARI | S | 3 | 0 | 0 | 3 | 6 | |
|  |  | | |  |  |  |  |  |  | | OTO5168 | EKLEMELİ İMALAT TEKNOLOJİLERİ | S | 3 | 0 | 0 | 3 | 6 | |
| **Toplam Kredi/AKTS** | | | | | | | | **12** | **30** | | **Toplam Kredi/AKTS** | | | | | | **11** | **30** | |
| **TEZ AŞAMASI** | | **III. YARIYIL / GÜZ** | | | | | | | | | | | **IV. YARIYIL / BAHAR** | | | | | | | | |
| OTO5183 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ III | | | Z | 4 | 0 | 0 | 0 | 5 | | OTO5184 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ IV | Z | 4 | 0 | 0 | 0 | 5 | |
| OTO5193 | TEZ DANIŞMANLIĞI III | | | Z | 0 | 1 | 0 | 0 | 25 | | OTO5194 | 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** | | | | AUTOMOTIVE ENGINEERING | | | | | | | | | | | | | | | |
| **DEPARTMENT / PROGRAM** | | | | Master's Degree Program (Secondary Education) | | | | | | | | | | | | | | | |
| **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** |
| OTO5191 | MA THESIS CONSULTING I | | | C | 0 | 1 | 0 | 0 | 1 | OTO5192 | MA THESIS CONSULTING II | C | 0 | 1 | | 0 | 0 | 5 |
| OTO5181 | ADVANCED TOPICS IN MA THESIS I | | | C | 4 | 0 | 0 | 0 | 5 | OTO5182 | ADVANCED TOPICS IN MA THESIS II | C | 4 | 0 | | 0 | 0 | 5 |
| OTO5119 | AUTOMOTIVE TRANSMISSION DESIGN | | | E | 3 | 0 | 0 | 3 | 6 | FEN5000 | RESEARCH TECHNIQUES AND PUBLICATION ETHICS IN AUTOMOTIVE ENGINEERING | C | 2 | 0 | | 0 | 2 | 2 |
| OTO5121 | DEVELOPING FORMS AND DESIGNING THE BODY WORK | | | E | 3 | 0 | 0 | 3 | 6 | OTO5302 | STATISTICS FOR ENVIRONMENTAL ENGINEERS | C | 3 | 0 | | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | OTO5172 | SEMINAR | C | 0 | 2 | | 0 | 0 | 4 |
| OTO5123 | ELECTRIC AND ELECTRONIC SYSTEMS FOR VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5114 | ALTERNATIVE PROPULSION SYSTEMS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5129 | MIXTURE FORMATION IN INTERNAL COMBUSTION ENGINES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5120 | PRODUCTION AND ASSEMBLY TECHNOLOGIES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5131 | INTERNAL COMBUSTION ENGINES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5124 | ENGINE DESIGN AND CONTROL FUNDAMENTALS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5133 | APPLICATION OF INTERNAL COMBUSTION ENGINES ON VEHICLE | | | E | 3 | 0 | 0 | 3 | 6 | OTO5128 | FINITE ELEMENT APPLICATIONS IN AUTOMOTIVE ENGINEERING | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5135 | VIBRATION AND NOISE IN VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5130 | VEHICLE INTERIOR DESIGN | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5137 | FUNDAMENTALS OF FINITE ELEMENT ANALYSIS | | | E | 3 | 0 | 0 | 3 | 6 | OTO5134 | AERODYNAMIC MODELLING FUNDAMENTALS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5141 | VEHICLE HVAC SYSTEMS AND THERMAL COMFORT | | | E | 3 | 0 | 0 | 3 | 6 | OTO5136 | ADVANCED TOPICS IN INTERNAL COMBUSTION ENGINES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5143 | SENSORS AND ACTUATORS IN VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5140 | ADVANCED MANUFACTURING TECHNIQUES FOR VEHICLES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5145 | ON-BOARD DIAGNOSTIC SYSTEMS IN VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5142 | INTERFACE CIRCUITS IN AUTOMOTIVE ELECTRONICS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5147 | MODELLING OF ENGINEERING SYSTEMS IN AUTOMOTIVE | | | E | 3 | 0 | 0 | 3 | 6 | OTO5144 | EMBEDDED CONTROL SYSTEMS IN VEHICLES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5149 | USE OF POLYMERS IN VEHICLES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5146 | INTERNAL COMBUSTION ENGINE TESTS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5153 | ADVANCED STRENGTH OF MATERIALS | | | E | 3 | 0 | 0 | 3 | 6 | OTO5148 | TRIBOLOGICAL SYSTEMS IN AUTOMOTIVE | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5155 | APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN AUTOMOTIVE ENGINEERING | | | E | 3 | 0 | 0 | 3 | 6 | OTO5150 | FLUID CONTROL SYSTEMS AND APPLICATION IN VEHICLES | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5157 | STRUCTURAL DESIGN AND OPTIMIZATION IN AUTOMOTIVE ENGINEERING | | | E | 3 | 0 | 0 | 3 | 6 | OTO5152 | VEHICLE SUSPENSION SYSTEMS DESIGN | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5159 | SYSTEM MODELING AND SIMULATION | | | E | 3 | 0 | 0 | 3 | 6 | OTO5154 | COMPUTER AIDED SIMULATION IN AUTOMOTİVE ENGİNEERİNG | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5161 | COMPUTER AIDED ANALYSIS OF MECHANICAL SYSTEM | | | E | 3 | 0 | 0 | 3 | 6 | OTO5156 | SPECIAL TOPICS IN VEHICLE DESIGN AND MANUFACTURING | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5163 | ADVANCE VEHICLE TECHNOLOGIES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5158 | RELIABILITY BASED DESIGN | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5165 | VEHICLE DESIGN PRINCIPLES | | | E | 3 | 0 | 0 | 3 | 6 | OTO5160 | VEHICLE OUT EMISSIONS AND THEIR CONTROL | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5167 | MATERIAL SELECTION IN AUTOMOTIVE ENGINEERING | | | E | 3 | 0 | 0 | 3 | 6 | OTO5162 | ADVANCED VEHICLE DYNAMICS | E | 3 | 0 | | 0 | 3 | 6 |
| OTO5169 | THEORETICAL AND EXPERIMENTAL METHODS IN MECHANICAL VIBRATIONS | | | E | 3 | 0 | 0 | 3 | 6 | OTO5164 | VEHICLE DISCRETE-TIME CONTROL SYSTEMS | E | 3 | 0 | | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | OTO5166 | DESIGN PRINCIPLES OF HYBRID AND ELECTRIC VEHICLES | E | 3 | 0 | | 0 | 3 | 6 |
|  |  | | |  |  |  |  |  |  | OTO5168 | ADDITIVE MANUFACTURING TECHNOLOGIES | E | 3 | 0 | | 0 | 3 | 6 |
| **Total Credits/ECTS** | | | | | | | | **12** | **30** | **Total Credits/ECTS** | | | | | | | **11** | **30** |
| **STAGE THESIS** | **III. TERM / FALL** | | | | | | | | | | **IV. TERM / SPRING** | | | | | | | | |
| OTO5183 | ADVANCED TOPICS IN MA THESIS III | | | C | 4 | 0 | 0 | 0 | 5 | OTO5184 | ADVANCED TOPICS IN MA THESIS IV | C | 4 | 0 | | 0 | 0 | 5 |
| OTO5193 | MA THESIS CONSULTING III | | | C | 0 | 1 | 0 | 0 | 25 | OTO5194 | MA THESIS CONSULTING IV | C | 0 | 1 | | 0 | 0 | 25 |
| **Total Credits/ECTS** | | | | | | | | **0** | **30** | **Total Credits/ECTS** | | | | | | | **0** | **30** |
| **TOTAL CREDITS: 23 - TOTAL ECTS: 120** | | | | | | | | | | | | | | | | | | | |

|  |  |
| --- | --- |
|  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ** **ENSTİTÜSÜ**  **2022-2023** **EĞİTİM ÖĞRETİM YILI DERS PLANLARI** | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | | | |
| **ANABİLİM/ ANASANAT DALI** | | | | OTOMOTİV MÜHENDİSLİĞİ | | | | | | | | | | | | | | | | | | |
| **BİLİM/ SANAT DALI / PROGRAMI** | | | | Doktora 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** |
| OTO6191 | TEZ DANIŞMANLIĞI I | | | Z | | 0 | 1 | 0 | 0 | 1 | OTO6192 | TEZ DANIŞMANLIĞI II | Z | 0 | | 1 | 0 | | 0 | | 5 |
| OTO6181 | DOKTORA UZMANLIK ALAN DERSİ I | | | Z | | 4 | 0 | 0 | 0 | 5 | OTO6182 | DOKTORA UZMANLIK ALAN DERSİ II | Z | 4 | | 0 | 0 | | 0 | | 5 |
| OTO6111 | TAŞITLARDA ÇARPMA ANALİZİ YÖNTEMLERİ | | | S | | 3 | 0 | 0 | 3 | 6 | FEN6002 | TEKNOLOJİ TRANSFERİ, AR-GE VE İNOVASYON | Z | 2 | | 0 | 0 | | 2 | | 2 |
|  |  | | |  | |  |  |  |  |  | OTO6172 | SEMİNER | Z | 0 | | 2 | 0 | | 0 | | 4 |
| OTO6113 | TAŞITLARDA İLERİ MALZEMELERİN KULLANIMI | | | S | | 3 | 0 | 0 | 3 | 6 | OTO6112 | OTOMOTİV MÜHENDİSLİĞİNDE KONTROL SİSTEMLERİ | S | 3 | | 0 | 0 | | 3 | | 6 |
| OTO6115 | TAŞITLARDA HESAPLAMALI AKIŞKANLAR DİNAMİĞİ YÖNTEMLERİ | | | S | | 3 | 0 | 0 | 3 | 6 | OTO6114 | TAŞIT FREN SİSTEMLERİ | S | 3 | | 0 | 0 | | 3 | | 6 |
| OTO6117 | OTOMOTİV MÜHENDİSLİĞİNDE MEKATRONİK | | | S | | 3 | 0 | 0 | 3 | 6 | OTO6116 | OTOMOTİV MÜHENDİSLİĞİNDE ÖZEL KONULAR | S | 3 | | 0 | 0 | | 3 | | 6 |
| OTO6119 | OTOMOTİV MÜHENDİSLİĞİNDE İLERİ DÜZEY PROGRAMLAMA | | | S | | 3 | 0 | 0 | 3 | 6 | OTO6118 | EMİSYON KONTROLÜ VE DENETİMİ | S | 3 | | 0 | 0 | | 3 | | 6 |
| OTO6121 | MÜHENDİSLER İÇİN ELASTİSİTE TEORİSİ | | | S | | 3 | 0 | 0 | 3 | 6 | OTO6120 | TAŞITLARDA KOMPOZİT VE SANDVİÇ YAPILAR | S | 3 | | 0 | 0 | | 3 | | 6 |
| OTO6123 | YAKIT ENJEKSİYON MEKANİZMALARI | | | S | | 3 | 0 | 0 | 3 | 6 | OTO6122 | YAKIT HÜCRELERİ | S | 3 | | 0 | 0 | | 3 | | 6 |
| OTO6125 | OTOMOTİV TASARIMINDA GÜVENİLİRLİK VE ÖMÜR HESAPLARI | | | S | | 3 | 0 | 0 | 3 | 6 | OTO6124 | TAŞITLARDA ELEKTRONİK KONTROL ÜNİTESİ TASARIMI | S | 3 | | 0 | 0 | | 3 | | 6 |
| OTO6101 | OTOMOTİV TASARIM, İMALAT VE PROJE YÖNETİMİ | | | S | | 3 | 0 | 0 | 3 | 6 | OTO6126 | TAŞITLARDA HASAR ANALİZİ | S | 3 | | 0 | 0 | | 3 | | 6 |
|  |  | | |  | |  |  |  |  |  | OTO6128 | MÜHENDİSLİK KIRILMA MEKANİĞİ TEORİSİ VE UYGULAMALARI | S | 3 | | 0 | 0 | | 3 | | 6 |
|  |  | | |  | |  |  |  |  |  | OTO6130 | PLASTİSİTE TEORİSİ VE UYGULAMALARI | S | 3 | | 0 | 0 | | 3 | | 6 |
|  |  | | |  | |  |  |  |  |  | OTO6132 | OTOMOTİV SAC METAL ŞEKİLLENDİRME | S | 3 | | 0 | 0 | | 3 | | 6 |
|  |  | | |  | |  |  |  |  |  | OTO6134 | İLERİ GAZ TÜRBİNİ TEORİSİ ve TASARIM ESASLARI | S | 3 | | 0 | 0 | | 3 | | 6 |
| **Toplam Kredi/AKTS** | | | | | | | | | **12** | **30** | **Toplam Kredi/AKTS** | | | | | | | | **11** | | **30** |
| **TEZ AŞAMASI** | **III. YARIYIL / GÜZ** | | | | | | | | | | | **IV. YARIYIL / BAHAR** | | | | | | | | | | |
| YET6177 | DOKTORA YETERLİLİK SINAVI | | | Z | | 0 | 0 | 0 | 0 | 10 | OTO6184 | DOKTORA UZMANLIK ALAN DERSİ IV | Z | 4 | | 0 | 0 | | 0 | | 5 |
| OTO6183 | DOKTORA UZMANLIK ALAN DERSİ III | | | Z | | 4 | 0 | 0 | 0 | 5 | OTO6194 | TEZ DANIŞMANLIĞI IV | Z | 0 | | 1 | 0 | | 0 | | 25 |
| OTO6193 | TEZ DANIŞMANLIĞI III | | | Z | | 0 | 1 | 0 | 0 | 15 |  |  |  |  | |  |  | |  | |  |
| **Toplam Kredi/AKTS** | | | | | | | | | **0** | **30** | **Toplam Kredi/AKTS** | | | | | | | | **0** | | **30** |
| **V. YARIYIL / GÜZ** | | | | | | | | | | | **VI. YARIYIL / BAHAR** | | | | | | | | | | |
| OTO6185 | DOKTORA UZMANLIK ALAN DERSİ V | | | Z | | 4 | 0 | 0 | 0 | 5 | OTO6186 | DOKTORA UZMANLIK ALAN DERSİ VI | Z | 4 | | 0 | 0 | | 0 | | 5 |
| OTO6195 | TEZ DANIŞMANLIĞI V | | | Z | | 0 | 1 | 0 | 0 | 25 | OTO6196 | TEZ DANIŞMANLIĞI VI | Z | 0 | | 1 | 0 | | 0 | | 25 |
|  |  | | |  | |  |  |  |  |  |  |  |  |  | |  |  | |  | |  |
| **Toplam Kredi/AKTS** | | | | | | | | | **0** | **30** | **Toplam Kredi/AKTS** | | | | | | | | **0** | | **30** |
| **VII. YARIYIL / GÜZ** | | | | | | | | | | | **VIII. YARIYIL / BAHAR** | | | | | | | | | | |
| OTO6187 | DOKTORA UZMANLIK ALAN DERSİ VII | | | Z | 4 | | 0 | 0 | 0 | 5 | OTO6188 | DOKTORA UZMANLIK ALAN DERSİ VIII | Z | 4 | | 0 | 0 | 0 | | 5 | |
| OTO6197 | TEZ DANIŞMANLIĞI VII | | | Z | 0 | | 1 | 0 | 0 | 25 | OTO6198 | TEZ DANIŞMANLIĞI VIII | Z | 0 | | 1 | 0 | 0 | | 25 | |
| **Toplam Kredi/AKTS** | | | | | | | | | **0** | **30** | **Toplam Kredi/AKTS** | | | | | | | **0** | | **30** | |
| **TOPLAM KREDİ: 23 - TOPLAM AKTS: 240** | | | | | | | | | | | | | | | | | | | | | | |

|  |  |
| --- | --- |
|  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | **BURSA ULUDAĞ UNIVERSITY**  **GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  **2022-2023** **ACADEMIC YEAR COURSE PLAN** | | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | |
| **DEPARTMENT OF** | | | | AUTOMOTIVE ENGINEERING | | | | | | | | | | | | | | | | | | |
| **DEPARTMENT / PROGRAM** | | | | Doctoral 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** | |
| OTO6191 | PHD THESIS CONSULTING I | | | C | | 0 | 1 | 0 | 0 | 1 | OTO6192 | PHD THESIS CONSULTING II | C | 0 | 1 | 0 | | 0 | | 5 | |
| OTO6181 | ADVANCED TOPICS IN PHD THESIS I | | | C | | 4 | 0 | 0 | 0 | 5 | OTO6182 | ADVANCED TOPICS IN PHD THESIS II | C | 4 | 0 | 0 | | 0 | | 5 | |
| OTO6111 | VEHICLE CRASH ANALYSIS METHODS | | | E | | 3 | 0 | 0 | 3 | 6 | FEN6002 | TECHNOLOGY TRANSFER, R&D AND INOVATION | C | 2 | 0 | 0 | | 2 | | 2 | |
|  |  | | |  | |  |  |  |  |  | OTO6172 | SEMINAR | C | 0 | 2 | 0 | | 0 | | 4 | |
| OTO6113 | THE USAGE OF ADVANCED MATERIALS IN VEHICLES | | | E | | 3 | 0 | 0 | 3 | 6 | OTO6112 | CONTROL SYSTEMS IN AUTOMOTIVE ENGINEERING | E | 3 | 0 | 0 | | 3 | | 6 | |
| OTO6115 | COMPUTATIONAL FLUID DYNAMICS METHODS OF VEHICLES | | | E | | 3 | 0 | 0 | 3 | 6 | OTO6114 | VEHICLE BRAKING SYSTEMS | E | 3 | 0 | 0 | | 3 | | 6 | |
| OTO6117 | MECHATRONICS IN AUTOMOTIVE ENGINEERING | | | E | | 3 | 0 | 0 | 3 | 6 | OTO6116 | SPECIAL TOPICS IN AUTOMOTIVE ENGINEERING | E | 3 | 0 | 0 | | 3 | | 6 | |
| OTO6119 | ADVANCED LEVEL PROGRAMMING IN AUTOMOTIVE ENGINEERING | | | E | | 3 | 0 | 0 | 3 | 6 | OTO6118 | EMISSION CONTROL AND MONITORING | E | 3 | 0 | 0 | | 3 | | 6 | |
| OTO6121 | THEORY of ELASTICITY FOR ENGINEERS | | | E | | 3 | 0 | 0 | 3 | 6 | OTO6120 | AUTOMOTIVE COMPOSITES AND SANDWICH STRUCTURES | E | 3 | 0 | 0 | | 3 | | 6 | |
| OTO6123 | FUEL INJECTION SYSTEMS | | | E | | 3 | 0 | 0 | 3 | 6 | OTO6122 | FUELL CELLS | E | 3 | 0 | 0 | | 3 | | 6 | |
| OTO6125 | RELIABILITIY AND LIFE CALCULATIONS IN AUTOMOTIVE DESIGN | | | E | | 3 | 0 | 0 | 3 | 6 | OTO6124 | DESIGNING OF ELECTRONIC CONTROL UNITS FOR VEHICLES | E | 3 | 0 | 0 | | 3 | | 6 | |
| OTO6101 | AUTOMOTIVE DESIGN, MANUFACTURING AND PROJECT MANAGEMENT | | | E | | 3 | 0 | 0 | 3 | 6 | OTO6126 | DAMAGE ANALYSIS OF VEHICLES | E | 3 | 0 | 0 | | 3 | | 6 | |
|  |  | | |  | |  |  |  |  |  | OTO6128 | THEORY of FRACTURE MECHANICS AND APPLICATIONS | E | 3 | 0 | 0 | | 3 | | 6 | |
|  |  | | |  | |  |  |  |  |  | OTO6130 | THEORY OF PLASTICITY AND APPLICATIONS | E | 3 | 0 | 0 | | 3 | | 6 | |
|  |  | | |  | |  |  |  |  |  | OTO6132 | SHEET METAL FORMING IN AUTOMOTIVE | E | 3 | 0 | 0 | | 3 | | 6 | |
|  |  | | |  | |  |  |  |  |  | OTO6134 | ADVANCED GAS TURBINE THEORY AND DESIGN FUNDAMENTALS | E | 3 | 0 | 0 | | 3 | | 6 | |
| **Total Credits/ECTS** | | | | | | | | | **12** | **30** | **Total Credits/ECTS** | | | | | | | **11** | | **30** | |
| **STAGE THESIS** | **III. TERM / FALL** | | | | | | | | | | | **IV. TERM / SPRING** | | | | | | | | | | |
| OTO6183 | ADVANCED TOPICS IN PHD THESIS III | | | C | | 4 | 0 | 0 | 0 | 5 | OTO6184 | ADVANCED TOPICS IN PHD THESIS IV | C | 4 | 0 | 0 | | 0 | | 5 | |
| OTO6193 | PHD THESIS CONSULTING III | | | C | | 0 | 1 | 0 | 0 | 15 | OTO6194 | PHD THESIS CONSULTING IV | C | 0 | 1 | 0 | | 0 | | 25 | |
| YET6177 | PHD PROFICIENCY EXAMINATION | | | C | | 0 | 0 | 0 | 0 | 10 |  |  |  |  |  |  | |  | |  | |
| **Total Credits/ECTS** | | | | | | | | | **0** | **30** | **Total Credits/ECTS** | | | | | | | **0** | | **30** | |
| **V. TERM / FALL** | | | | | | | | | | | **VI. TERM / SPRING** | | | | | | | | | | |
| OTO6185 | ADVANCED TOPICS IN PHD THESIS V | | | C | | 4 | 0 | 0 | 0 | 5 | OTO6186 | ADVANCED TOPICS IN PHD THESIS VI | C | 4 | 0 | 0 | | 0 | | 5 | |
| OTO6195 | PHD THESIS CONSULTING V | | | C | | 0 | 1 | 0 | 0 | 25 | OTO6196 | PHD THESIS CONSULTING VI | C | 0 | 1 | 0 | | 0 | | 25 | |
|  |  | | |  | |  |  |  |  |  |  |  |  |  |  |  | |  | |  | |
| **Total Credits/ECTS** | | | | | | | | | **0** | **30** | **Total Credits/ECTS** | | | | | | | **0** | | **30** | |
| **VII. TERM / FALL** | | | | | | | | | | | **VIII. TERM / SPRING** | | | | | | | | | | |
| OTO6187 | ADVANCED TOPICS IN PHD THESIS VII | | | C | 4 | | 0 | 0 | 0 | 5 | OTO6188 | ADVANCED TOPICS IN PHD THESIS VIII | C | 4 | 0 | 0 | | 0 | | 5 | |
| OTO6197 | PHD THESIS CONSULTING VII | | | C | 0 | | 1 | 0 | 0 | 25 | OTO6198 | PHD THESIS CONSULTING VIII | C | 0 | 1 | 0 | | 0 | | 25 | |
| **Total Credits/ECTS** | | | | | | | | | **0** | **30** | **Total Credits/ECTS** | | | | | | | | **0** | | **30** |
| **TOTAL CREDITS: 23 - TOTAL ECTS: 240** | | | | | | | | | | | | | | | | | | | | | | |

|  |  |
| --- | --- |
|  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ** **ENSTİTÜSÜ**  **2022-2023** **EĞİTİM ÖĞRETİM YILI DERS PLANLARI** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | |
| **ANABİLİM/ ANASANAT DALI** | | | | | | OTOMOTİV MÜHENDİSLİĞİ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **BİLİM/ SANAT DALI / PROGRAMI** | | | | | | Doktora (Lisans derecesi ile) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **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** | |
| OTO6191 | | DOKTORA TEZ DANIŞMANLIĞI I | | | Z | | | 0 | | 1 | | 0 | | 0 | | 1 | | OTO6192 | | DOKTORA TEZ DANIŞMANLIĞI II | | Z | 0 | | | 1 | | | 0 | | | 0 | | 1 | |
| OTO6181 | | DOKTORA UZMANLIK ALAN DERSİ I | | | Z | | | 4 | | 0 | | 0 | | 0 | | 5 | | OTO6182 | | DOKTORA UZMANLIK ALAN DERSİ II | | Z | 4 | | | 0 | | | 0 | | | 0 | | 5 | |
| OTO5119 | | TAŞIT TRANSMİSYON SİSTEMLERİ TASARIMI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5102 | | OTOMOTİV MÜHENDİSLİĞİNDE NUMERİK ANALİZ VE OPTİMİZASYON YÖNTEMLERİ | | Z | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5121 | | GÖVDE TASARIM VE FORM GELİŞTİRME | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5114 | | ALTERNATİF TAHRİK SİSTEMLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5123 | | TAŞITLARDA ELEKTRİK VE ELEKTRONİK SİSTEMLER | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5120 | | ÜRETİM VE MONTAJ TEKNOLOJİLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5129 | | MOTORLARDA KARIŞIM OLUŞUM TEKNİKLERİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5124 | | MOTOR TASARIM VE KONTROL TEMELLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5131 | | İÇTEN YANMALI MOTORLAR | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5128 | | OTOMOTİV MÜHENDİSLİĞİNDE SONLU ELEMANLAR UYGULAMALARI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5133 | | İÇTEN YANMALI MOTORUN TAŞITA UYGULANMASI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5130 | | TAŞIT İÇ TASARIMI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5135 | | TAŞITLARDA TİTREŞİM VE GÜRÜLTÜ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5134 | | AERODİNAMİK MODELLEME ESASLARI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5137 | | SONLU ELEMANLAR ANALİZİNİN ESASLARI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5136 | | İÇTEN YANMALI MOTORLARDA ÖZEL KONULAR | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5141 | | TAŞIT İKLİMLENDİRME SİSTEMLERİ VE ISIL KONFOR | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5140 | | TAŞITLARDA İLERİ ÜRETİM TEKNOLOJİLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5143 | | TAŞITLARDA SENSÖR VE EYLEYİCİLER | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5142 | | OTOMOTİV ELEKTRONİĞİNDE ARA YÜZ DEVRELERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5145 | | TAŞITLARDA BÜTÜNLEŞİK TANI KOYMA SİSTEMLERİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5144 | | TAŞITLARDA GÖMÜLÜ KONTROL SİSTEMLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5147 | | OTOMOTİVDE MÜHENDİSLİK SİSTEMLERİNİN MODELLENMESİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5146 | | İÇTEN YANMALI MOTOR TESTLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5149 | | TAŞITLARDA POLİMERLERİN KULLANIMI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5148 | | OTOMOTİVDE TRİBOLOJİK SİSTEMLER | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5153 | | İLERİ MUKAVEMET | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5150 | | OTOMOTİVDE AKIŞKAN DENETİM SİSTEMLERİ VE UYGULAMALARI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5155 | | OTOMOTİV MÜHENDİSLİĞİNDE YAPAY ZEKA UYGULAMALARI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5152 | | TAŞIT SÜSPANSİYON SİSTEMLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5157 | | OTOMOTİV MÜHENDİSLİĞİNDE YAPISAL TASARIM VE OPTİMİZASYON | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5154 | | OTOMOTİV MÜHENDİSLİĞİNDE BİLGİSAYAR DESTEKLİ SİMÜLASYON | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5159 | | SİSTEM MODELLEME VE BENZETİM | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5156 | | TAŞIT TASARIMI VE İMALATINDA ÖZEL KONULAR | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5161 | | MEKANİK SİSTEMLERİN BİLGİSAYAR DESTEKLİ ANALİZİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5158 | | GÜVENİLİRLİK TEMELLİ TASARIM | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5163 | | İLERİ TAŞIT TEKNOLOJİLERİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5160 | | TAŞIT EMİSYONLARI VE KONTROL SİSTEMLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5165 | | TAŞIT TASARIM ESASLARI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5162 | | İLERİ TAŞIT DİNAMİĞİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5167 | | OTOMOTİV MÜHENDİSLİĞİNDE MALZEME SEÇİMİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5164 | | TAŞITLARDA AYRIK ZAMANLI DENETİM SİSTEMLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5167 | | OTOMOTİV MÜHENDİSLİĞİNDE MALZEME SEÇİMİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5166 | | ELEKTRİKLİ VE HİBRİD ARAÇLARIN TASARIM ESASLARI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO5169 | | MEKANİK TİTREŞİMLERDE TEORİK VE DENEYSEL YÖNTEMLER | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5168 | | EKLEMELİ İMALAT TEKNOLOJİLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| **Toplam Kredi/AKTS** | | | | | | | | | | | | | | **12** | | **30** | | **Toplam Kredi/AKTS** | | | | | | | | | | | | | | **12** | | **30** | |
| **TEZ AŞAMASI** | | **III. YARIYIL / GÜZ** | | | | | | | | | | | | | | | | | | **IV. YARIYIL / BAHAR** | | | | | | | | | | | | | | | | | |
| OTO6193 | | DOKTORA TEZ DANIŞMANLIĞI III | | | Z | | | 0 | | 1 | | 0 | | 0 | | 1 | | OTO6174 | | SEMİNER | | Z | 0 | | | 2 | | | 0 | | | 0 | | 2 | |
| OTO6183 | | DOKTORA UZMANLIK ALAN DERSİ III | | | Z | | | 4 | | 0 | | 0 | | 0 | | 5 | | FEN5000 | | ARAŞTIRMA TEKNİKLERİ VE YAYIN ETİĞİ | | Z | 2 | | | 0 | | | 0 | | | 2 | | 2 | |
| OTO6111 | | TAŞITLARDA ÇARPMA ANALİZİ YÖNTEMLERİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | FEN6002 | | TEKNOLOJİ TRANSFER, AR-GE VE İNOVASYON | | Z | 2 | | | 0 | | | 0 | | | 2 | | 2 | |
| OTO6113 | | TAŞITLARDA İLERİ MALZEMELERİN KULLANIMI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6194 | | DOKTORA TEZ DANIŞMANLIĞI IV | | Z | 0 | | | 1 | | | 0 | | | 0 | | 5 | |
| OTO6115 | | TAŞITLARDA HESAPLAMALI AKIŞKANLAR DİNAMİĞİ YÖNTEMLERİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6184 | | DOKTORA UZMANLIK ALAN DERSİ IV | | Z | 4 | | | 0 | | | 0 | | | 0 | | 5 | |
| OTO6117 | | OTOMOTİV MÜHENDİSLİĞİNDE MEKATRONİK | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6112 | | OTOMOTİV MÜHENDİSLİĞİNDE KONTROL SİSTEMLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO6119 | | OTOMOTİV MÜHENDİSLİĞİNDE İLERİ DÜZEY PROGRAMLAMA | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6114 | | TAŞIT FREN SİSTEMLERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO6121 | | MÜHENDİSLER İÇİN ELASTİSİTE TEORİSİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6116 | | OTOMOTİV MÜHENDİSLİĞİNDE ÖZEL KONULAR | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO6123 | | YAKIT ENJEKSİYON MEKANİZMALARI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6118 | | EMİSYON KONTROLÜ VE DENETİMİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO6125 | | OTOMOTİV TASARIMINDA GÜVENİLİRLİK VE ÖMÜR HESAPLARI | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6120 | | TAŞITLARDA KOMPOZİT VE SANDVİÇ YAPILAR | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
| OTO6101 | | OTOMOTİV TASARIM, İMALAT VE PROJE YÖNETİMİ | | | S | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6122 | | YAKIT HÜCRELERİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6124 | | TAŞITLARDA ELEKTRONİK KONTROL ÜNİTESİ TASARIMI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6126 | | TAŞITLARDA HASAR ANALİZİ | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6128 | | MÜHENDİSLİK KIRILMA MEKANİĞİ TEORİSİ VE UYGULAMALARI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6130 | | PLASTİSİTE TEORİSİ VE UYGULAMALARI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6132 | | OTOMOTİV SAC METAL ŞEKİLLENDİRME | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6134 | | İLERİ GAZ TÜRBİNİ TEORİSİ ve TASARIM ESASLARI | | S | 3 | | | 0 | | | 0 | | | 3 | | 6 | |
|  | |  | | |  | | |  | |  | |  | |  | |  | |  | |  | |  |  | | |  | | |  | | |  | |  | |
| **Toplam Kredi/AKTS** | | | | | | | | | | | | | | **12** | | **30** | | **Toplam Kredi/AKTS** | | | | | | | | | | | | | | **11** | | **30** | |
| **V. YARIYIL / GÜZ** | | | | | | | | | | | | | | | | | | **VI. YARIYIL / BAHAR** | | | | | | | | | | | | | | | | | |
| YET6177 | | DOKTORA YETERLİLİK SINAVI | | | Z | | | 0 | | 0 | | 0 | | 0 | | 10 | | OTO6186 | | DOKTORA UZMANLIK ALAN DERSİ VI | | Z | 4 | | | 0 | | | 0 | | | 0 | | 5 | |
| OTO6185 | | DOKTORA UZMANLIK ALAN DERSİ V | | | Z | | | 4 | | 0 | | 0 | | 0 | | 5 | | OTO6196 | | DOKTORA TEZ DANIŞMANLIĞI VI | | Z | 0 | | | 1 | | | 0 | | | 0 | | 25 | |
| OTO6195 | | DOKTORA TEZ DANIŞMANLIĞI V | | | Z | | | 0 | | 1 | | 0 | | 0 | | 15 | |  | |  | |  |  | | |  | | |  | | |  | |  | |
| **Toplam Kredi/AKTS** | | | | | | | | | | | | | | **0** | | **30** | | **Toplam Kredi/AKTS** | | | | | | | | | | | | | | **0** | | **30** | |
| **VII. YARIYIL / GÜZ** | | | | | | | | | | | | | | | | | | **VIII. YARIYIL / BAHAR** | | | | | | | | | | | | | | | | | |
| OTO6187 | DOKTORA UZMANLIK ALAN DERSİ VII | | | | | Z | | | 4 | | 0 | | 0 | | 0 | | 5 | OTO6188 | | | DOKTORA UZMANLIK ALAN DERSİ VIII | Z | | 4 | | | 0 | | | 0 | | 0 | | 5 | |
| OTO6197 | DOKTORA TEZ DANIŞMANLIĞI VII | | | | | Z | | | 0 | | 1 | | 0 | | 0 | | 21 | OTO6198 | | | DOKTORA TEZ DANIŞMANLIĞI VIII | Z | | | 0 | | | 1 | | 0 | | 0 | | 25 | |
| **Toplam Kredi/AKTS** | | | | | | | | | | | | | | | **0** | | **30** | **Toplam Kredi/AKTS** | | | | | | | | | | | | | | **0** | | **30** | |
| **IX. YARIYIL / GÜZ** | | | | | | | | | | | | | | | | | | **X. YARIYIL / BAHAR** | | | | | | | | | | | | | | | | | |
| OTO6189 | | DOKTORA UZMANLIK ALAN DERSİ IX | | | Z | | 4 | | | 0 | | 0 | | 0 | | 5 | | OTO6190 | | DOKTORA UZMANLIK ALAN DERSİ X | | Z | 4 | | | 0 | | | 0 | | 0 | | 5 | | |
| OTO6199 | | DOKTORA TEZ DANIŞMANLIĞI IX | | | Z | | 0 | | | 1 | | 0 | | 0 | | 25 | | OTO6200 | | DOKTORA TEZ DANIŞMANLIĞI X | | Z | 0 | | | 1 | | | 0 | | 0 | | 25 | | |
| **Toplam Kredi/AKTS** | | | | | | | | | | | | | | **0** | | **30** | | **Toplam Kredi/AKTS** | | | | | | | | | | | | | **0** | | **30** | | |
| **TOPLAM KREDİ: 47 - TOPLAM AKTS: 300** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | **BURSA ULUDAĞ UNIVERSITY**  **GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  **2022-2023** **ACADEMIC YEAR COURSE PLAN** | | | | | | | | | | | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | | | |
| **DEPARTMENT OF** | | | | | AUTOMOTIVE ENGINEERING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **DEPARTMENT / PROGRAM** | | | | | Integrated Doctoral 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** | | |
| OTO6191 | | PHD THESIS CONSULTING I | | | C | | | 0 | | 1 | | 0 | | 0 | | 1 | | OTO6192 | PHD THESIS CONSULTING II | | C | 0 | | | 1 | 0 | | 0 | | | 5 | | |
| OTO6181 | | ADVANCED TOPICS IN PHD THESIS I | | | C | | | 4 | | 0 | | 0 | | 0 | | 5 | | OTO6182 | ADVANCED TOPICS IN PHD THESIS II | | C | 4 | | | 0 | 0 | | 0 | | | 5 | | |
| OTO5119 | | AUTOMOTIVE TRANSMISSION DESIGN | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5114 | ALTERNATIVE PROPULSION SYSTEMS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5121 | | DEVELOPING FORMS AND DESIGNING THE BODY WORK | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5120 | PRODUCTION AND ASSEMBLY TECHNOLOGIES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5123 | | ELECTRIC AND ELECTRONIC SYSTEMS FOR VEHICLES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5124 | ENGINE DESIGN AND CONTROL FUNDAMENTALS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5127 | | INTERNAL COMBUSTION ENGINE DESIGN | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5128 | FINITE ELEMENT APPLICATIONS IN AUTOMOTIVE ENGINEERING | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5129 | | MIXTURE FORMATION IN INTERNAL COMBUSTION ENGINES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5130 | VEHICLE INTERIOR DESIGN | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5131 | | INTERNAL COMBUSTION ENGINES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5134 | AERODYNAMIC MODELLING FUNDAMENTALS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5133 | | APPLICATION OF INTERNAL COMBUSTION ENGINES ON VEHICLE | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5136 | ADVANCED TOPICS IN INTERNAL COMBUSTION ENGINES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5135 | | VIBRATION AND NOISE IN VEHICLES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5140 | ADVANCED MANUFACTURING TECHNIQUES FOR VEHICLES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5137 | | FUNDAMENTALS OF FINITE ELEMENT ANALYSIS | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5142 | INTERFACE CIRCUITS IN AUTOMOTIVE ELECTRONICS | | S | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5141 | | VEHICLE HVAC SYSTEMS AND THERMAL COMFORT | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5144 | EMBEDDED CONTROL SYSTEMS IN VEHICLES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5143 | | SENSORS AND ACTUATORS IN VEHICLES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5146 | INTERNAL COMBUSTION ENGINE TESTS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5145 | | ON-BOARD DIAGNOSTIC SYSTEMS IN VEHICLES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5148 | TRIBOLOGICAL SYSTEMS IN AUTOMOTIVE | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5147 | | MODELLING OF ENGINEERING SYSTEMS IN AUTOMOTIVE | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5150 | FLUID CONTROL SYSTEMS AND APPLICATION IN VEHICLES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5149 | | USE OF POLYMERS IN VEHICLES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5152 | VEHICLE SUSPENSION SYSTEMS DESIGN | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5153 | | ADVANCED STRENGTH OF MATERIALS | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5154 | COMPUTER AIDED SIMULATION IN AUTOMOTİVE ENGİNEERİNG | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5155 | | APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN AUTOMOTIVE ENGINEERING | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5156 | SPECIAL TOPICS IN VEHICLE DESIGN AND MANUFACTURING | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5157 | | STRUCTURAL DESIGN AND OPTIMIZATION IN AUTOMOTIVE ENGINEERING | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5158 | RELIABILITY BASED DESIGN | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5159 | | SYSTEM MODELING AND SIMULATION | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5160 | VEHICLE OUT EMISSIONS AND THEIR CONTROL | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5161 | | COMPUTER AIDED ANALYSIS OF MECHANICAL SYSTEM | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5162 | ADVANCED VEHICLE DYNAMICS | | E | 3 | | | 0 | 0 | | 6 | | | 6 | | |
| OTO5163 | | ADVANCE VEHICLE TECHNOLOGIES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5164 | VEHICLE DISCRETE-TIME CONTROL SYSTEMS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5165 | | VEHICLE DESIGN PRINCIPLES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5166 | DESIGN PRINCIPLES of HYBRID AND ELECTRIC VEHICLES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5167 | | MATERIAL SELECTION IN AUTOMOTIVE ENGINEERING | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO5168 | ADDITIVE MANUFACTURING TECHNOLOGIES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO5169 | | THEORETICAL AND EXPERIMENTAL METHODS IN MECHANICAL VIBRATIONS | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | |  |  | |  |  | | |  |  | |  | | |  | | |
| **Total Credits/ECTS** | | | | | | | | | | | | | | **12** | | **30** | | **Total Credits/ECTS** | | | | | | | | | | **12** | | | **30** | | |
| **STAGE THESIS** | **III. TERM / FALL** | | | | | | | | | | | | | | | | | | **IV. TERM / SPRING** | | | | | | | | | | | | | | | |
| OTO6193 | | PHD THESIS CONSULTING I | | | C | | | 0 | | 1 | | 0 | | 0 | | 1 | | OTO6174 | SEMINAR | | C | 0 | | | 2 | 0 | | 0 | | | 2 | | |
| OTO6183 | | ADVANCED TOPICS IN PHD THESIS I | | | C | | | 4 | | 0 | | 0 | | 0 | | 5 | | FEN6002 | TECHNOLOGY TRANSFER, R&D AND INOVATION | | C | 2 | | | 0 | 0 | | 2 | | | 2 | | |
| OTO6111 | | VEHICLE CRASH ANALYSIS METHODS | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | FEN5000 | RESEARCH TECHNIQUES AND PUBLICATION ETHICS | | C | 2 | | | 0 | 0 | | 2 | | | 2 | | |
| OTO6113 | | THE USAGE OF ADVANCED MATERIALS IN VEHICLES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6194 | PHD THESIS CONSULTING II | | C | 0 | | | 1 | 0 | | 0 | | | 5 | | |
| OTO6115 | | COMPUTATIONAL FLUID DYNAMICS METHODS OF VEHICLES | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6184 | ADVANCED TOPICS IN PHD THESIS II | | C | 4 | | | 0 | 0 | | 0 | | | 5 | | |
| OTO6117 | | MECHATRONICS IN AUTOMOTIVE ENGINEERING | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6112 | CONTROL SYSTEMS IN AUTOMOTIVE ENGINEERING | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO6119 | | ADVANCED LEVEL PROGRAMMING IN AUTOMOTIVE ENGINEERING | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6114 | VEHICLE BRAKING SYSTEMS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO6121 | | THEORY of ELASTICITY FOR ENGINEERS | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6116 | SPECIAL TOPICS IN AUTOMOTIVE ENGINEERING | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO6123 | | FUEL INJECTION SYSTEMS | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6118 | EMISSION CONTROL AND MONITORING | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO6125 | | RELIABILITIY AND LIFE CALCULATIONS IN AUTOMOTIVE DESIGN | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6120 | AUTOMOTIVE COMPOSITES AND SANDWICH STRUCTURES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| OTO6101 | | AUTOMOTIVE DESIGN, MANUFACTURING AND PROJECT MANAGEMENT | | | E | | | 3 | | 0 | | 0 | | 3 | | 6 | | OTO6122 | FUELL CELLS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6124 | DESIGNING OF ELECTRONIC CONTROL UNITS FOR VEHICLES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6126 | DAMAGE ANALYSIS OF VEHICLES | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6128 | THEORY of FRACTURE MECHANICS AND APPLICATIONS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6130 | THEORY OF PLASTICITY AND APPLICATIONS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6132 | SHEET METAL FORMING IN AUTOMOTIVE | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
|  | |  | | |  | | |  | |  | |  | |  | |  | | OTO6134 | ADVANCED GAS TURBINE THEORY AND DESIGN FUNDAMENTALS | | E | 3 | | | 0 | 0 | | 3 | | | 6 | | |
| **Total Credits/ECTS** | | | | | | | | | | | | | | **12** | | **30** | | **Total Credits/ECTS** | | | | | | | | | | **11** | | | **30** | | |
| **V. TERM / FALL** | | | | | | | | | | | | | | | | | | **VI. TERM / SPRING** | | | | | | | | | | | | | | | |
| OTO6185 | | ADVANCED TOPICS IN PHD THESIS V | | | C | | | 4 | | 0 | | 0 | | 0 | | 5 | | OTO6186 | ADVANCED TOPICS IN PHD THESIS VI | | C | 4 | | | 0 | 0 | | 0 | | | 5 | | |
| OTO6195 | | PHD THESIS CONSULTING V | | | C | | | 0 | | 1 | | 0 | | 0 | | 15 | | OTO6196 | PHD THESIS CONSULTING VI | | C | 0 | | | 1 | 0 | | 0 | | | 25 | | |
| YET6177 | | PHD PROFICIENCY EXAMINATION | | | C | | | 0 | | 0 | | 0 | | 0 | | 10 | |  |  | |  |  | | |  |  | |  | | |  | | |
| **Total Credits/ECTS** | | | | | | | | | | | | | | **0** | | **30** | | **Total Credits/ECTS** | | | | | | | | | | **0** | | | **30** | | |
| **VII. TERM / SPRING** | | | | | | | | | | | | | | | | | | **VIII. TERM / SPRING** | | | | | | | | | | | | | | | |
| OTO6187 | ADVANCED TOPICS IN PHD THESIS VII | | | | | C | | | 4 | | 0 | | 0 | | 0 | | 5 | OTO6188 | | ADVANCED TOPICS IN PHD THESIS VIII | C | | 4 | 0 | | | 0 | | | 0 | | | 5 |
| OTO6197 | PHD THESIS CONSULTING VIII | | | | | C | | | 0 | | 1 | | 0 | | 0 | | 25 | OTO6198 | | PHD THESIS CONSULTING VIII | C | | 0 | 1 | | | 0 | | | 0 | | | 25 |
| **Total Credits/ECTS** | | | | | | | | | | | | | | | **0** | | **30** | **Total Credits/ECTS** | | | | | | | | | | | | **0** | | | **30** |
| **IX. TERM / FALL** | | | | | | | | | | | | | | | | | | **X. TERM / SPRING** | | | | | | | | | | | | | | | |
| OTO6189 | | SPECIAL TOPICS IN PHD THESIS IX | | | C | | 4 | | | 0 | | 0 | | 0 | | 7 | | OTO6190 | ADVANCED TOPICS IN PHD THESIS X | | C | 4 | | | 0 | 0 | | 0 | | | 5 | | |
| OTO6199 | | PHD THESIS CONSULTING IX | | | C | | 0 | | | 1 | | 0 | | 0 | | 23 | | OTO6200 | PHD THESIS CONSULTING X | | C | 0 | | | 1 | 0 | | 0 | | | 25 | | |
| **Total Credits/ECTS** | | | | | | | | | | | | | | **0** | | **30** | | **Total Credits/ECTS** | | | | | | | | | | | **0** | | | **30** | |
| **TOTAL CREDITS: 47 - TOTAL ECTS: 300** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

|  |  |
| --- | --- |
|  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ ENSTİTÜSÜ**  **2022-2023 EĞİTİM ÖĞRETİM YILINDA EKLENEN DERSLER** | | | | | | | | | | | **FR 1.1.1\_02** |
| **ANABİLİM/ ANASANAT DALI** | | | Otomotiv Mühendisliği | | | | | | | | | | |
| **BİLİM/SANAT DALI / PROGRAMI** | | | Yüksek Lisans Programı | | | | | | | | | | |
| **Kodu** | **Dersin Adı** | | | **Yarıyıl** | **Türü** | **T** | **U** | **L** | **Kredi** | **AKTS** | **Uygulama Esasları\*** | **Gerekçe** | |
| OTO5168 | Eklemeli İmalat Teknolojileri | | | 2.Yarıyıl | S | 3 | 0 | 0 | 3 | 6 | 2022-2023 Akademik Yılından itibaren uygulanacak | Eklemeli imalat alanında son yıllarda yaşanan gelişmeler ve otomotiv sektöründe kullanımına yönelik uygulamaların artması nedeniyle Otomotiv Mühendisliği alanında lisansüstü programlarda yer alması ve öğrencilerin eklemeli imalat konularında eğitim almasının uygun olduğuna karar verilmiştir | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  | |
| **Toplam Kredi/AKTS** | | | | | | | | |  |  |  | | |
| \* Her değişiklikte giriş yılı farklı olan öğrenciler için uygulama esaslarının açıkça belirtilmesi. | | | | | | | | | | | | | |

|  |  |
| --- | --- |
|  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  ………………………**ENSTİTÜSÜ**  ……….-……… **EĞİTİM ÖĞRETİM YILI KALDIRILAN/DEĞİŞTİRİLEN DERSLER** | | | | | | | | | | | | | | | | | | | **FR 1.1.1\_02** | |
| **ANABİLİM/ ANASANAT DALI** | | |  | | | | | | | | | | | | | | | | | | | |
| **BİLİM/SANAT DALI / PROGRAMI** | | | / | | | | | | | | | | | | | | | | | | | |
| ……...-…….. **Eğitim-Öğretim Yılı Kaldırılan/Değiştirilen Ders**  *(Bir önceki eğitim-öğretim yılı yazılacak)* | | | | | | | | | | | ……..-…….. **Eğitim-Öğretim Yılı Eş Değeri**  *(Teklif edilen eğitim-öğretim yılı yazılacak)* | | | | | | | | | **Uygulama Esasları\*** | | **Gerekçe\*\*** |
| **Kodu** | **Dersin Adı** | | | **Yarıyıl** | **Türü** | **T** | **U** | **L** | **Kredi** | **AKTS** | **Kodu** | **Dersin Adı** | **Yarıyıl** | **Türü** | **T** | **U** | **L** | **Kredi** | **AKTS** |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |  |
| **Toplam Kredi/AKTS** | | | | | | | | |  |  | **Toplam Kredi/AKTS** | | | | | | |  |  |  | | |
| \* Her değişiklikte giriş yılı farklı olan öğrenciler için uygulama esaslarının açıkça belirtilmesi.  \*\* Gerekçeler tablo ekinde metin olarak da belirtilebilir. | | | | | | | | | | | | | | | | | | | | | | |

|  |  |
| --- | --- |
|  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ ENSTİTÜSÜ**  **2022-2023 EĞİTİM ÖĞRETİM YILI ÖNERİLEN DERSLERİN ULUSAL/ULUSLARARASI KARŞILIKLARI** | | | | | | | | | | | | | **FR 1.1.1\_02** |
| **ANABİLİM/ANASANAT DALI** | | | Otomotiv Mühendisliği | | | | | | | | | | | | |
| **BİLİM/SANAT DALI / PROGRAMI** | | | Yüksek Lisans Programı | | | | | | | | | | | | |
| **Kodu** | **Dersin Adı** | | | **Yarıyıl** | **Türü** | **T** | **U** | **L** | **Kredi** | **AKTS** | **Dersin İçeriği** | **Örnek Üniversiteler** | | | |
| **Örnek 1** | **Örnek 2** | **Örnek 3** | |
| OTO5168 | Eklemeli İmalat Teknolojileri | | | 2. Yarıyıl | S | 3 | 0 | 0 | 3 | 6 | Eklemeli imalata giriş, Eklemeli imalatta yazılımlar, Oryantasyon ve dilimleme, destek geliştirme, fotopolimerizasyon, Toz yataklı sistemler, Ekstrüzyon bazlı imalat, İnkjet bağlayıcı ile Üretim yöntemleri, Direkt enerji biriktirmesi, Hibrit yöntemler | Eklemeli Üretim  Sabancı Üniversitesi  https://www.saba nciuniv.edu/tr/ad ay- ogrenciler/lisa nsu stu/ders-ka ta logu/course/ MFG-516 | Eklemeli Üretim Teknolojisi  Yıldız Teknik Üniversitesi  http://www.bologna.yildiz.edu.tr/index .php?r =course/view&id=9344&aid=83 | Eklemeli Üretim Teknolojileri  Marmara Üniversitesi  https://meobs.ma rmara.edu.tr/Ders /eklemeli-imalat- teknolojileri/mkm 7051-72841-2041 | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  |  | | |  |  |  |  |  |  |  |  |  |  |  | |
|  | | | | | | | | | | | | | | | |

|  |  |
| --- | --- |
|  |  |