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|  | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ ENSTİTÜSÜ**  **2022-2023 EĞİTİM ÖĞRETİM YILI DERS PLANLARI** | | | | | | | | | | | | **FR 1.1.1\_02** | | | |
| **ANABİLİM/ ANASANAT DALI** | | | BİYOMALZEMELER | | | | | | | | | | | | | | |
| **BİLİM/ SANAT DALI / PROGRAMI** | | | Biyomalzemeler  / 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** |
| BYM5191 | YÜKSEK LİSANS TEZ DANIŞMANLIĞI I | | Z | 0 | 1 | 0 | 0 | 1 | BYM5192 | YÜKSEK LİSANS TEZ DANIŞMANLIĞI II | Z | 0 | 1 | 0 | 0 | 1 |
| BYM5001 | BİYOMALZEMELERE GİRİŞ | | Z | 3 | 0 | 0 | 3 | 6 | BYM5172 | SEMİNER | Z | 0 | 2 | 0 | 0 | 4 |
| BYM5181 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ I | | Z | 4 | 0 | 0 | 0 | 5 | BYM5002 | ARAŞTIRMA TEKNİKLERİ VE DENEYSEL TASARIM | Z | 2 | 0 | 0 | 2 | 6 |
| BYM5010  (TAN5003) | GENEL İNSAN ANATOMİSİ | | Z | 2 | 2 | 0 | 2 | 6 | BYM5182 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ II | Z | 4 | 0 | 0 | 0 | 5 |
|  |  | |  |  |  |  |  |  | FEN5000 | ARAŞTIRMA TEKNİKLERİ VE YAYIN ETİĞİ | Z | 2 | 0 | 0 | 0 | 2 |
|  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BYM | SEÇMELİ DERS | | S |  |  |  | 3 | 6 | BYM | SEÇMELİ DERS \* | S |  |  |  | 3 | 6 |
| BYM | SEÇMELİ DERS \* | | S |  |  |  | 3 | 6 | BYM | SEÇMELİ DERS \* | S |  |  |  | 3 | 6 |
| **Toplam Kredi/AKTS** | | | | | | | **12** | **30** | **Toplam Kredi/AKTS** | | | | | | **11** | **30** |
| **TEZ AŞAMASI** | **III. YARIYIL / GÜZ** | | | | | | | | | **IV. YARIYIL / BAHAR** | | | | | | | |
| BYM5183 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ III | | Z | 4 | 0 | 0 | 0 | 5 | BYM5194 | YÜKSEK LİSANS TEZ DANIŞMANLIĞI IV | Z | 0 | 0 | 0 | 0 | 25 |
| BYM5193 | YÜKSEK LİSANS TEZ DANIŞMANLIĞI III | | Z | 0 | 0 | 0 | 0 | 25 | BYM5184 | YÜKSEK LİSANS UZMANLIK ALAN DERSİ IV | Z | 4 | 0 | 0 | 0 | 5 |
|  |  | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Toplam Kredi/AKTS** | | | | | | | **0** | **30** | **Toplam Kredi/AKTS** | | | | | | **0** | **30** |
| **TOPLAM KREDİ: 23 - TOPLAM AKTS: 300** | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | |

**Not:** \*: Öğrenci isterse, danışmanının onayı ile her yarıyıl için en fazla 1 (bir) seçmeli dersini aynı AKTS değerinde olmak şartıyla alan dışından da alabilir. Anabilim Dalınız doktora programından alacağınız ders de alan dışı kabul edilmektedir.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Anabilim Dalı Başkanı  Prof. Dr. Yusuf ULCAY | | | | | | | | | | Enstitü Müdürü  Prof. Dr. Hüseyin Aksel EREN | | | | | | | |
|  | | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ ENSTİTÜSÜ**  **2022-2023 EĞİTİM ÖĞRETİM YILI DERS PLANLARI (SEÇMELİ DERSLER)** | | | | | | | | | | | | | **FR 1.1.1\_02** | | | |
| **ANABİLİM/ ANASANAT DALI** | | | | BİYOMALZEMELER | | | | | | | | | | | | | | | |
| **BİLİM/ SANAT DALI / PROGRAMI** | | | | Biyomalzemeler  / 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** |
| BYM5007 | BİYOMALZEMELERİN MEKANİK ÖZELLİKLERİ | | S | 3 | 0 | 0 | 3 | 6 | | BYM5004 | BİYOSENSÖR VE BİYOELEKTRONİKLER İÇİN İLERİ MALZEMELER | S | 3 | 0 | 0 | 3 | 6 |
| KİM5021 | AKILLI POLİMERLER | | S | 3 | 0 | 0 | 2 | 6 | | BYM5006 | POLİMERİK ve KOMPOZİT DOKU İSKELELERİ ve KAREKTERİZASYONU | S | 3 | 0 | 0 | 3 | 6 |
| TEK5049 | POLİMER KİMYASI | | S | 3 | 0 | 0 | 3 | 6 | | BYM5008 | POLİMERİK BİYOMALZEMELER | S | 3 | 0 | 0 | 3 | 6 |
| BİO5213 | SERBEST RADİKAL BİYOLOJİSİ | | S | 3 | 0 | 0 | 3 | 6 | | BİO5402 | BİYOLOJİDE DOKU VE HÜCRE KÜLTÜRÜ | S | 3 | 0 | 0 | 3 | 6 |
| KİM5023 | GÖZENEKLİ MALZEMELER | | S | 3 | 0 | 0 | 3 | 6 | | TEK5040 | FONKSİYONEL POLİMERLER | S | 3 | 0 | 0 | 3 | 6 |
| KİM5037 | MOLEKÜLER BASKILANMIŞ POLİMERLER VE NANOTEKNOLOJİK UYGUAMALAR | | S | 3 | 0 | 0 | 3 | 6 | | KİM5048 | NMR SPEKTROSKOPİSİ İLE YAPI TAYİNİ | S | 3 | 0 | 0 | 3 | 6 |
| MGB5427 | MİKROBİYAL BİYOTEKNOLOJİ | | S | 3 | 0 | 0 | 3 | 6 | | KİM5032 | SENTETİK ÖZEL POLİMERLER | S | 3 | 0 | 0 | 3 | 6 |
| BİO5517 | MİKROSKOBİK GÖRÜNTÜLEME VE İŞLEME TEKNİKLERİ | | S | 3 | 0 | 0 | 3 | 6 | | KİM5036 | NANOTEKNOLOJİYE GİRİŞ | S | 3 | 0 | 0 | 3 | 6 |
| BİO5401 | HÜCRE MOLEKÜLER BİYOLOJİSİ | | S | 3 | 0 | 0 | 4 | 6 | | KİM5026 | BİYOMOLEKÜLLERİN İLERİ ANALİZ YÖNTEMLERİ | S | 3 | 0 | 0 | 3 | 6 |
|  |  | |  |  |  |  |  |  | | BİO5208 | KÖK HÜCRE BİYOLOJİSİ | S | 3 | 0 | 0 | 3 | 6 |
|  |  | |  |  |  |  |  |  | | KİM5048 | NMR SPEKTROSKOPİ İLE YAPI TAYİNİ | S | 3 | 0 | 0 | 3 | 6 |
|  |  | |  |  |  |  |  |  | | TEK5050 | MALZEME BİLİMİNDE İLERİ KAVRAMLAR | S | 3 | 0 | 0 | 3 | 6 |
|  | | | | | | | | | | | | | | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | **BURSA ULUDAĞ UNIVERSITY**  **GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  **2022-2023** **ACADEMIC YEAR COURSE PLAN** | | | | | | | | | | | | | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | | | | |
| **DEPARTMENT OF** | | | | | | | BIOMATERIALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **DEPARTMENT / PROGRAM** | | | | | | | Biomaterials / 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** |
| BYM5191 | MA THESIS CONSULTING I | | | | | | C | | | 0 | | 1 | | 0 | 0 | | 1 | | BYM5192 | | MA THESIS CONSULTING II | | C | | 0 | | | 1 | | | 0 | | 0 | | | 1 |
| BYM5181 | ADVANCED TOPICS IN MA THESIS I | | | | | | C | | | 4 | | 0 | | 0 | 0 | | 5 | | BYM5182 | | ADVANCED TOPICS IN MA THESIS II | | C | | 4 | | | 0 | | | 0 | | 0 | | | 5 |
| BYM5001 | INTRODUCTION TO BIOMATERIALS | | | | | | C | | | 3 | | 0 | | 0 | 3 | | 6 | | BYM5172 | | SEMINAR | | C | | 0 | | | 2 | | | 0 | | 0 | | | 4 |
|  |  | | | | | |  | | |  | |  | |  |  | |  | | BYM 5002 | | RESEARCH TECHNİQUES AND EXPERİMENTAL DESİGN | | C | | 3 | | | 0 | | | 0 | | 3 | | | 6 |
|  |  | | | | | |  | | |  | |  | |  |  | |  | | BYM5010  (TAN5003) | | GENERAL HUMAN ANATOMY | | C | | 2 | | | 2 | | | 0 | | 2 | | | 6 |
|  |  | | | | | |  | | |  | |  | |  |  | |  | | FEN5000 | | RESEARCH TECHNIQUES and PUBLICATION ETHICS | | C | | 2 | | | 0 | | | 0 | | 2 | | | 2 |
|  |  | | | | | |  | | |  | |  | |  |  | |  | |  | |  | |  | |  | | |  | | |  | |  | | |  |
|  | ELECTIVE COURSE | | | | | | E | | |  | |  | |  |  | | 6 | |  | | ELECTIVE COURSE \* | | E | |  | | |  | | |  | |  | | | 6 |
|  | ELECTIVE COURSE \* | | | | | | E | | |  | |  | |  |  | | 6 | |  | |  | |  | |  | | |  | | |  | |  | | |  |
|  |  | | | | | |  | | |  | |  | |  |  | |  | |  | |  | |  | |  | | |  | | |  | |  | | |  |
| **Total Credits/ECTS** | | | | | | | | | | | | | | | **12** | | **30** | | **Total Credits/ECTS** | | | | | | | | | | | | | | **11** | | | **30** |
| **STAGE THESIS** | | | **III. TERM / FALL** | | | | | | | | | | | | | | | | | | | **IV. TERM / SPRING** | | | | | | | | | | | | | | | | | |
| BYM5183 | ADVANCED TOPICS IN MA THESIS III | | | | | | C | | | 4 | | 0 | | 0 | 0 | | 5 | | BYM5184 | | ADVANCED TOPICS IN MA THESIS IV | | C | | 4 | | | 0 | | | 0 | | 0 | | | 5 |
| BYM5193 | MA THESIS CONSULTING III | | | | | | C | | | 0 | | 1 | | 0 | 0 | | 25 | | BYM5194 | | 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** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Not:** \*: Öğrenci isterse, danışmanının onayı ile her yarıyıl için en fazla 1 (bir) seçmeli dersini aynı AKTS değerinde olmak şartıyla alan dışından da alabilir. Anabilim Dalınız doktora programından alacağınız ders de alan dışı kabul edilmektedir.   |  |  | | --- | --- | | Anabilim Dalı Başkanı  Prof. Dr. Yusuf ULCAY | Enstitü Müdürü  Prof. Dr. Hüseyin Aksel EREN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | | | | | **BURSA ULUDAĞ UNIVERSITY**  **GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  **2022-2023** **ACADEMIC YEAR COURSE PLAN (ELECTIVE COURSES)** | | | | | | | | | | | | | | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | | | | | | | **DEPARTMENT OF** | | | | | | BIOMATERIALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **DEPARTMENT / PROGRAM** | | | | | | Biomaterials / 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** | | BYM5007 | MECHANIC PROPERTIES OF BIOMATERIALS | | | | | | S | | | | 3 | | 0 | | 0 | 0 | | 6 | | BYM5008 | | POLYMERIC BIOMATERIALS | | S | | 3 | | | 0 | | | 0 | | | 0 | | | 6 | | CHEM5021 | SMART POLYMERS | | | | | | S | | | | 3 | | 0 | | 0 | 2 | | 6 | | BYM5006 | | POLYMERIC AND COMPOSİTE SCOFOLDS AND THEIR CHARACTERIZATION | | S | | 3 | | | 0 | | | 0 | | | 0 | | | 6 | | TEK5049 | POLYMER CHEMISTRY | | | | | | S | | | | 3 | | 0 | | 0 | 3 | | 6 | | TEK5040 | | FUNCTIONAL POLYMERS | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | | BYM5003 | SURFACE CHARACTERİZATİON OF BİOMATERİAS | | | | | | S | | | | 3 | | 0 | | 0 | 3 | | 6 | | BİO5402 | | ANIMAL CELL CULTURE | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | | BİO5401 | MOLECULAR BIOLOGY OF THE CELL | | | | | | S | | | | 3 | | 0 | | 0 | 4 | | 6 | | BİO5208 | | STEM CELL BIOLOGY | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | | BİO5213 | FREE RADİCALS IN BIOLGY | | | | | | S | | | | 3 | | 0 | | 0 | 3 | | 6 | | CHEM5048 | | STRUCTURE DETERMINATION BY NMR SPECTROSCOPY | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | | BİO5517 | MICROSCOPIC IMAGING AND PROCESSING TECHNIQUES | | | | | | S | | | | 3 | | 0 | | 0 | 3 | | 6 | | CHEM5032 | | SYNTHETIC SPECIALTY POLYMERS | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | | CHEM5037 | MOLECULAR IMPRONTED POLYMERS AND NANOBIOTECH. APPLICATIONS | | | | | | S | | | | 3 | | 0 | | 0 | 3 | | 6 | | CHEM5036 | | INTRODUCTION TO NANOTECHNOLOGY | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | | CHEM5043 | ORGANIC ELECTRONIC MATERIALS | | | | | | S | | | | 3 | | 0 | | 0 | 3 | | 6 | | TEK5050 | | ADVANCED CONCEPTS IN MATERIALS | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | | MBG5427 | MICROBIAL BIOTECHNOLOGY | | | | | | S | | | | 3 | | 0 | | 0 | 3 | | 6 | | CHEM5026 | | ADVANCED ANALYSIS TECHNIQUES OF BIOMOLECULES | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | | CHEM5023 | POROUS MATERIALS | | | | | | S | | | | 3 | | 0 | | 0 | 3 | | 6 | | BYM5004 | | ADVANCED MATERİALS FOR BIOSENSORS AND BIOELECTRONİCS | | S | | 3 | | | 0 | | | 0 | | | 3 | | | 6 | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ** **ENSTİTÜSÜ**  **2022-2023** **EĞİTİM ÖĞRETİM YILI DERS PLANLARI** | | | | | | | | | | | | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | | | | | | | | | | | **ANABİLİM/ ANASANAT DALI** | | | | | | | BİYOMALZEMELER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **BİLİM/ SANAT DALI / PROGRAMI** | | | | | | | Biyomalzemeler / 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** | | | | BYM6191 | | TEZ DANIŞMANLIĞI I | | | | | Z | | | 0 | 1 | | 0 | | 0 | | | 1 | | BYM6192 | | TEZ DANIŞMANLIĞI II | | Z | | 0 | | | 1 | | | 0 | | | 0 | | | 1 | | | | BYM6181 | | DOKTORA UZMANLIK ALAN DERSİ I | | | | | Z | | | 4 | 0 | | 0 | | 0 | | | 5 | | BYM6182 | | DOKTORA UZMANLIK ALAN DERSİ II | | Z | | 4 | | | 0 | | | 0 | | | 0 | | | 5 | | | |  | |  | | | | |  | | |  |  | |  | |  | | |  | | BYM6172 | | SEMİNER | | Z | | 0 | | | 2 | | | 0 | | | 0 | | | 4 | | | |  | |  | | | | |  | | |  |  | |  | |  | | |  | | FEN6000 | | TEKNOLOJİ TRANSFERİ, AR-GE VE İNOVASYON | | Z | | 2 | | | 0 | | | 0 | | | 2 | | | 2 | | | |  | | SEÇMELİ DERS | | | | | S | | |  |  | |  | |  | | | 6 | |  | | SEÇMELİ DERS | | S | |  | | |  | | |  | | |  | | | 6 | | | |  | | SEÇMELİ DERS | | | | | S | | |  |  | |  | |  | | | 6 | |  | | SEÇMELİ DERS | | S | |  | | |  | | |  | | |  | | | 6 | | | |  | | SEÇMELİ DERS | | | | | S | | |  |  | |  | |  | | | 6 | |  | | SEÇMELİ DERS \* | | S | |  | | |  | | |  | | |  | | | 6 | | | |  | | SEÇMELİ DERS \* | | | | | S | | |  |  | |  | |  | | | 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 | | BYM6184 | | DOKTORA UZMANLIK ALAN DERSİ IV | | Z | | 4 | | | 0 | | | 0 | | | 0 | | | 5 | | | | BYM6183 | | DOKTORA UZMANLIK ALAN DERSİ III | | | | | Z | | | 4 | 0 | | 0 | | 0 | | | 5 | | BYM6194 | | TEZ DANIŞMANLIĞI IV | | Z | | 0 | | | 1 | | | 0 | | | 0 | | | 25 | | | | BYM6193 | | 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** | | | | | | | | | | | | | | | | | | | | | | BYM6185 | | DOKTORA UZMANLIK ALAN DERSİ V | | | | | Z | | | 4 | 0 | | 0 | | 0 | | | 5 | | BYM6186 | | DOKTORA UZMANLIK ALAN DERSİ VI | | Z | | 4 | | | 0 | | | 0 | | | 0 | | | 5 | | | | BYM6195 | | TEZ DANIŞMANLIĞI V | | | | | Z | | | 0 | 1 | | 0 | | 0 | | | 25 | | BYM6196 | | 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** | | | | | | | | | | | | | | | | | | | | | | BYM6187 | | DOKTORA UZMANLIK ALAN DERSİ VIII | | | | | Z | | 4 | | 0 | | 0 | | 0 | | | 5 | | BYM6188 | | DOKTORA UZMANLIK ALAN DERSİ VIII | | Z | | 4 | | | 0 | | | 0 | | 0 | | | 5 | | | | | BYM6197 | | TEZ DANIŞMANLIĞI VIII | | | | | Z | | 0 | | 1 | | 0 | | 0 | | | 25 | | BYM6198 | | 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** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Not:** \*: Öğrenci isterse, danışmanının onayı ile her yarıyıl için en fazla 1 (bir) seçmeli dersini aynı AKTS değerinde olmak şartıyla alan dışından da alabilir. Doktora programı öğrencisi yüksek lisans programlarından ders alamaz. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
|  | | | | | **BURSA ULUDAĞ ÜNİVERSİTESİ**  **FEN BİLİMLERİ** **ENSTİTÜSÜ**  **2022-2023** **EĞİTİM ÖĞRETİM YILI DERS PLANLARI (SEÇMELİ DERSLER)** | | | | | | | | | | | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | | | | | | | | |
| **ANABİLİM/ ANASANAT DALI** | | | | | | | | BİYOMALZEMELER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **BİLİM/ SANAT DALI / PROGRAMI** | | | | | | | | Biyomalzemeler / 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** | | |
| BYM6001 | | BİYOTEKNOLOJİYE GİRİŞ | | | | | S | | 3 | 0 | | 0 | | 3 | | | 6 | | BYM6004 | | BİYOMEDİKAL CİHAZLARIN BİYOLOJİK DEĞERLENDİRİLMESİ | | S | | 3 | | | 0 | | | 0 | | 3 | | | 6 | | |
| BYM6003 | | İLAÇ TAŞIMA SİSTEMLERİ | | | | | S | | 3 | 0 | | 0 | | 3 | | | 6 | | TEK6012 | | BİO - TIP UYGULAMALARI İÇİN TEKSTİL MALZEMELERİ | | S | | 3 | | | 0 | | | 0 | | 3 | | | 6 | | |
| BYM6005 | | HİDROJELLERİN BİYOMEDİKAL UYGULAMALARI | | | | | S | | 3 | 0 | | 0 | | 3 | | | 6 | | KİM6020 | | ELEKTROKİMYASAL SENSÖRLER | | S | | 3 | | | 0 | | | 0 | | 3 | | | 6 | | |
| BYM6007 | | DOKU MÜHENDİSLİĞİ VE REJENERATİF TIPTA KULLANILAN POLİMERLER | | | | | S | | 3 | 0 | | 0 | | 3 | | | 6 | | TEK6018 | | POLİMER NANOKOMPOZİTLER | | S | | 3 | | | 0 | | | 0 | | 3 | | | 6 | | |
| KİM6039 | | ARAYÜZEY BİLİMİ I | | | | | S | | 3 | 0 | | 0 | | 3 | | | 6 | | KİM6028 | | MOLEKÜLER TANIMA VE BİYOMOLEKÜL KOMPLEKSLERİ | | S | | 3 | | | 0 | | | 0 | | 3 | | | 6 | | |
| KİM6041 | | İLERİ POLİMER BİLİMİ VE TEKNOLOJİSİ I | | | | | S | | 3 | 0 | | 0 | | 3 | | | 6 | | KİM6038 | | İLERİ POLİMER BİLİMİ VE TEKNOLOJİSİ II | | S | | 3 | | | 0 | | | 0 | | 3 | | | 6 | | |
| THE6003 | | MOLEKÜLER HÜCRE VE DOKU BİYOLOJİSİ | | | | | S | | 3 | 0 | | 0 | | 3 | | | 6 | | THE6012 | | ELEKTRON MİKROSKOPİ TEKNİKLERİ | | S | | 3 | | | 0 | | | 0 | | 3 | | | 6 | | |
| TFZ6001 | | MOLEKÜLER VE HÜCRESEL FİZYOLOJİ | | | | | S | | 3 | 0 | | 0 | | 3 | | | 9 | |  | |  | |  | |  | | |  | | |  | |  | | |  | | |
| TTB6001 | | PROTEİNLERİN YAPISI VE FONKSİYONLARI | | | | | S | | 2 | 2 | | 0 | | 3 | | | 9 | |  | |  | |  | |  | | |  | | |  | |  | | |  | | |
|  | |  | | | | |  | |  |  | |  | |  | | |  | |  | |  | |  | |  | | |  | | |  | |  | | |  | | |
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| Anabilim/Anasanat Dalı Başkanı  Prof. Dr. Yusuf ULCAY | Enstitü Müdürü  Prof. Dr. Hüseyin Aksel EREN |

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|  | | | **BURSA ULUDAĞ UNIVERSITY**  **GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  **2022-2023** **ACADEMIC YEAR COURSE PLAN** | | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | |
| **DEPARTMENT OF** | | | | BIOMATERIALS | | | | | | | | | | | | | | | | | | |
| **DEPARTMENT / PROGRAM** | | | | Biomaterials / 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** | |
| BYM6191 | PHD THESIS CONSULTING I | | | C | | 0 | 1 | 0 | 0 | 1 | BYM6192 | PHD THESIS CONSULTING II | C | 0 | 1 | 0 | | 0 | | 1 | |
| BYM6181 | ADVANCED TOPICS IN PHD THESIS I | | | C | | 4 | 0 | 0 | 0 | 5 | BYM6182 | ADVANCED TOPICS IN PHD THESIS II | C | 4 | 0 | 0 | | 0 | | 5 | |
|  |  | | |  | |  |  |  |  |  | BYM6172 | SEMINAR | C | 0 | 2 | 0 | | 0 | | 4 | |
|  |  | | |  | |  |  |  |  |  | FEN6000 | TECHONOLOGY TRANSFER, AR-GE AND İNNOVATİON | C | 2 | 0 | 0 | | 2 | | 2 | |
|  | ELECTIVE COURSE | | | E | |  |  |  |  | 6 |  | ELECTIVE COURSE | E |  |  |  | |  | | 6 | |
|  | ELECTIVE COURSE | | | E | |  |  |  |  | 6 |  | ELECTIVE COURSE | E |  |  |  | |  | | 6 | |
|  | ELECTIVE COURSE | | | E | |  |  |  |  | 6 |  | ELECTIVE COURSE \* | E |  |  |  | |  | | 6 | |
|  | ELECTIVE COURSE \* | | | E | |  |  |  |  | 6 |  |  |  |  |  |  | |  | |  | |
| **Total Credits/ECTS** | | | | | | | | | **12** | **30** | **Total Credits/ECTS** | | | | | | | **11** | | **30** | |
| **STAGE THESIS** | **III. TERM / FALL** | | | | | | | | | | | **IV. TERM / SPRING** | | | | | | | | | | |
| BYM6183 | ADVANCED TOPICS IN PHD THESIS III | | | C | | 4 | 0 | 0 | 0 | 10 | BYM6184 | ADVANCED TOPICS IN PHD THESIS IV | C | 4 | 0 | 0 | | 0 | | 5 | |
| BYM6193 | PHD THESIS CONSULTING III | | | C | | 0 | 1 | 0 | 0 | 15 | BYM6194 | PHD THESIS CONSULTING IV | C | 0 | 1 | 0 | | 0 | | 25 | |
| YET6177 | PHD PROFICIENCY EXAMINATION | | | C | | 0 | 0 | 0 | 0 | 5 |  |  |  |  |  |  | |  | |  | |
| **Total Credits/ECTS** | | | | | | | | | **0** | **30** | **Total Credits/ECTS** | | | | | | | **0** | | **30** | |
| **V. TERM / FALL** | | | | | | | | | | | **VI. TERM / SPRING** | | | | | | | | | | |
| BYM6185 | ADVANCED TOPICS IN PHD THESIS V | | | C | | 4 | 0 | 0 | 0 | 5 | BYM6186 | ADVANCED TOPICS IN PHD THESIS VI | C | 4 | 0 | 0 | | 0 | | 5 | |
| BYM6195 | PHD THESIS CONSULTING V | | | C | | 0 | 1 | 0 | 0 | 25 | BYM6196 | 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** | | | | | | | | | | |
| BYM6187 | ADVANCED TOPICS IN PHD THESIS VII | | | C | 4 | | 0 | 0 | 0 | 5 | BYM6188 | ADVANCED TOPICS IN PHD THESIS VIIII | C | 4 | 0 | 0 | | 0 | | 5 | |
| BYM6197 | PHD THESIS CONSULTING VIII | | | C | 0 | | 1 | 0 | 0 | 25 | BYM6198 | PHD THESIS CONSULTING VIIII | C | 0 | 1 | 0 | | 0 | | 25 | |
| **Total Credits/ECTS** | | | | | | | | | **0** | **30** | **Total Credits/ECTS** | | | | | | | | **0** | | **30** |
| **TOTAL CREDITS: 23 - TOTAL ECTS: 240** | | | | | | | | | | | | | | | | | | | | | | |
| **Not:** \*: Öğrenci isterse, danışmanının onayı ile her yarıyıl için en fazla 1 (bir) seçmeli dersini aynı AKTS değerinde olmak şartıyla alan dışından da alabilir. Doktora programı öğrencisi yüksek lisans programlarından ders alamaz.   |  |  | | --- | --- | | Head of Department  Prof. Dr. Yusuf ULCAY | Director of Institute  Prof. Dr. Hüseyin Aksel |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | | | **BURSA ULUDAĞ UNIVERSITY**  **GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES**  **2022-2023** **ACADEMIC YEAR COURSE PLAN (ELECTIVE COURSES)** | | | | | | | | | | | | | | **FR 1.1.1\_02** | | | | **DEPARTMENT OF** | | | | BIOMATERIALS | | | | | | | | | | | | | | | | | **DEPARTMENT / PROGRAM** | | | | Biomaterials / 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** | | BYM6001 | INTRODUCTION TO BIOTECHNOLOGY | | | S | 3 | 0 | 0 | 3 | 6 | BYM6004 | BIOLOGICAL EVOLIATION OF BIOMEDICAL DEVICES | S | 3 | 0 | 0 | | 3 | 6 | | BYM6003 | DRUG DELIVERY SYSTEMS | | | S | 3 | 0 | 0 | 3 | 6 | TEK 6018 | POLYMER NANOCOMPOSITES | S | 3 | 0 | 0 | | 3 | 6 | | CHEM6041 | ADVANCED POLYMER SCIENCE AND TECHNOLOGY I | | | S | 3 | 0 | 0 | 3 | 6 | TEK6012 | TEXTILE MATERIALS FOR BIOMEDICAL APPLICATIONS | S | 3 | 0 | 0 | | 3 | 6 | | TFZ6001 | MOLECULAR AND CELLULAR PHYSIOLOGY | | | S | 3 | 0 | 0 | 3 | 9 | CHEM6020 | ELECTROCHEMİCAL SENSORS | S | 3 | 0 | 0 | | 3 | 6 | | BYM6005 | BIOMEDICAL APPLICATIONS OF HYDROGELS | | | S | 3 | 0 | 0 | 3 | 6 | CHEM6028 | MOLECULAR RECOGNİTİON AND BIOMOLECULE COMPLEXES | S | 3 | 0 | 0 | | 3 | 6 | | BYM6007 | POLYMERS IN TISSUE ENGINEERING AND REGENARTIVE MEDICINE | | | S | 3 | 0 | 0 | 3 | 6 | CHEM6038 | ADVANCED POLYMER SCIENCE AND TECHNOLOGY II | S | 3 | 0 | 0 | | 3 | 6 | | BYM6009 | BIOCOMPABILITY AND BIOMATERIAL DESIGN | | | S | 3 | 0 | 0 | 3 | 6 | THE6012 | ELECTRON MICROCOPY TECHNIQUES | S | 3 | 0 | 0 | | 3 | 6 | | CHEM6039 | INTERFACE SCIENCE I | | | S | 3 | 0 | 0 | 3 | 6 |  |  |  |  |  |  | |  |  | | THE6003 | MOLECULAR BIOLOGY OF CELL AND TISSUE | | | S | 3 | 0 | 0 | 3 | 6 |  |  |  |  |  |  | |  |  | | TTB6001 | PROTEIN STRUCTURE AND FUNCTION | | | S | 2 | 2 | 0 | 3 | 9 |  |  |  |  |  |  | |  |  | |  | | | | | | | | | | | | | | | | | | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |