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| **Fen Bilimleri Enstitüsü**  **Elektrik ve Bilgisayar Mühendisliği Tezli / Tezsiz Yüksek Lisans Programı Yüksek lisans**  **Program Dersi**  **DERS TANIM BİLGİLERİ** | | | | |
| **Dersin Adı  (Türkçe)** | Nesneye Yönelik Yazılım Mühendisliği | | | |
| **Dersin Adı (İngilizce)** | Object Oriented Software Engineering | | | |
| **Dersin Kodu** | **Teori/Saat** | **Uygulama/Saat** | **Laboratuar/Saat** | **AKTS Kredisi** |
| EBM 512 | 3 | 0 | 0 | 8 |
| **Dersin Koordinatörü** |  | | | |
| **Öğretim Elemanları** | Yrd. Doç. Dr. Ali Öztürk | | | |
| **Yardımcı Öğretim Elemanları** |  | | | |
| **Dersin Amacı** | Teaching the ability to make architectural design, to choose the appropriate architectural pattern, to understand and use the design patterns, to extract the static and dynamic model of the software using UML starting from the requirement elicitation and analysisi phase. Understanding the importance of the unit test, integration test and system test concepts which are used to enhance the software quality. Teaching the management of software processes. | | | |
| **Dersin İçeriği** | Requirement elicitation, analysis and management, UML, Static model, Dynamic model, Design patterms, Architectural design and architectural patterns, Software testing, Management of software processes | | | |
| **Dersin Dili** | Türkçe | | | |

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| **DERSİN PROGRAM TEMEL YETERLİLİKLERİ İLE İLİŞKİSİ** | |
| **No** | **Program Yeterlilikleri** |
|
| H | To be able to propose, design and implement software solutions fort he real problems |
| I | To be able to work individually or in a team in various stages such as project design, development and test |
| J | Database management and programming ability |
| K | Gaining innovational design and research&development ability, publishing sciencitic papers |

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| **DERSİN PROGRAM YETERLİLİKLERİNİ KARŞILAMA DÜZEYİ** | | | | |
| **No** | **Alt Yeterlilikler (Bilgi, Beceriler ve Yetkinlikler)\*** | **Karşılama Düzeyi** | | |
| Düşük | Orta | Yüksek |
| H | To be able to propose, design and implement software solutions fort he real problems |  |  | X |
| I | To be able to work individually or in a team in various stages such as project design, development and test |  |  | X |
| J | Database management and programming ability | X |  |  |
| K | Gaining innovational design and research&development ability, publishing sciencitic papers |  | X |  |

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| **DERSİN ÖĞRENME KAZANIMLARI** | | | |
| **Sıra No** |  | **Program\***  **Yeterlilikleri ile İlişkisi** | **Ölçme\*\*Yöntemi** |
| 1 | Requirement elicitation, analysis and management |  | 1 |
| 2 | Extracting the static and dynamic model of the software using UML |  | 2 |
| 3 | Choosing the appropriate design patterns for the given software problem |  | 2 |
| 4 | Learning alternative software architecture patterns |  | 2 |
| 5 | Learning software testing methods |  | 1 |
| 6 | Understanding the software process management |  | 1 |

\*Yazılı Sınav:1, Sözlü Sınav:2, Ev Ödevi:3, Lab./Sınav:4, Seminer/Sunum:5, Dönem Ödevi:6

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| **DERSİN HAFTALIK İÇERİĞİ** | |
| **Hafta** | **Detaylı İçerik** |
| 1-2 | Requirement elicitation, analysis and management |
| 3-4 | UML |
| 5-6 | Static and dynamic modelling with UML |
| 7-8 | Design patterns |
| 9-10 | Software architecture patterns |
| 11-12 | Software testing |
| 13-14 | Management of software processes |

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| **DERS KİTABI VEYA MALZEMESİ** | |
| **No** | **Kaynak** |
| 1 | Bernd Bruegge and Allen H. Dutoit, Object-Oriented Software Engineering Using UML, Patterns, and Java, 3rd Ed, Prentice Hall, 2010 |
| 2 | T. C. Lethbridge and Robert Laganiere, Object Oriented Software Engineering, McGraw-Hill, 2005 |

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| **AKTS/ÇALIŞMA YÜKÜ TABLOSU** | | | | |
| **Etkinlikler** | **Sayısı** | **Çalışma Süresi (Saat)** | **Çalışma Süresi (Dakika)** | **Toplam (Çalışma Yükü)** |
| Ders Hafta Sayısı ve Saati | 14 | 3 |  | 42 |
| Sınıf Dışı Ders Çalışma Süresi (Ön çalışma, Kütüphane, Pekiştirme) | 14 | 2 |  | 28 |
| Ara Sınav | 1 | 24 |  | 24 |
| Kısa Sınav |  |  |  |  |
| Ödev |  |  |  |  |
| Uygulama |  |  |  |  |
| Laboratuar |  |  |  |  |
| Proje | 1 | 72 |  | 72 |
| Atölye |  |  |  |  |
| Sunum/Seminer Hazırlama |  |  |  |  |
| Alan Çalışması |  |  |  |  |
| Diğer |  |  |  |  |
| Dönem Sonu Sınavı | 1 | 24 |  | 24 |
| Toplam Yük | | | | 190 |
| Toplam Yük / 30 | | | | 6,33 |
| Dersin AKTS Kredisi | | | | 8 |