

0205304 OBJECT ORIENTED PROGRAMMING

Normal Education

Evening Education

Fall 2018-2019

**Course Format:** face-to-face

**INSTRUCTOR INFORMATION**

**Instructor:**

**Title:**

**Office:**

**Phone:**

**Office Hours:**

**E-mail:**

**COURSE DESCRIPTION**

**Credit hours:** *3 credit (3+0)*

**ECTS**: *6*

**Required or elective:** *Required for Computer Engineering Students*

**Catalog Description:** *This course is designed as an entry level programming course for students who have prior programming experience. This course introduces the concepts of object-oriented programming to students with a background in the procedural paradigm. The course begins with a brief review of control structures and data types with emphasis on structured data types and array processing. It then moves on to introduce the object-oriented programming paradigm, focusing on the definition and use of classes along with the fundamentals of object-oriented design.*

**Prerequisites:** *0205205 (Structured Programming)*

**Textbook(s) and/or required materials:**

*Mastering Object-Oriented Python by Steven F. Lott*

**Course Objectives**

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| --- | --- |
| ***The objectives of this course are to:*** | |
| *1* | *The aim of this course is to teach the object oriented programming concepts needed to develop effective and flexible object oriented software.* |

**Course Topics**

|  |  |
| --- | --- |
| ***No*** |  |
| *1* | *Classes* |
| *2* | *Integrating Seamlessly With Python* |
| *3* | *Attribute Access, Properties and Descriptors* |
| *4* | *Consistent Design* |
| *5* | *Using Callables and Context* |
| *6* | *Creating Containers and Collections* |
| *7* | *Decorators and Mixins* |
| *8* | *Midterm Exam* |
| *9* | *Serializing and Saving* |
| *10* | *Storing and Retrieving Objects* |
| *11* | *Transmitting and Sharing Objects* |
| *12* | *Configuration Files and Persistence* |
| *13* | *The Logging and Warning Modules* |
| *14* | *General repetition and practices* |

**Course Learning Outcomes**

*At the end of the course, students;*

* *Apply good programming style and understand the impact of style on developing and maintaining programs.*
* *Explain the benefits of object oriented design and understand when it is an appropriate methodology to use.*
* *Design object oriented solutions for small systems involving multiple objects.*
* *Implement, test and debug solutions in Python.*

**Evaluation methods**

|  |  |
| --- | --- |
| *1. Midterm Exam* | 40% |
| *2. Final Exam* | 60% |

**Professional component**

|  |  |
| --- | --- |
| *Engineering topics* | 100% |
| *General education* | 0% |
| *Mathematics and basic sciences* | 0% |

**Person(s) who prepared this description and date of preparation**

*Emre DENİZ, May 2018*

**Date of last revision**

*May 2018*