Marmara Üniversitesi
Köklü Geçmiş... Güçlü Gelecek...

Marmara University

Marmara University Lifelong Learning Programme

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Undergraduate - Faculty of Engineering - Industrial Engineering (English)

Curriculum Name	Course Code	Course Name	Type of Course	Year	Semester	ECTS
Industrial Engineering (English) - 2015	CSE1143	Computer Programming for Industrial Engineering	Compulsory		1	5.00

Course Contents

Objectives of the Course

The purpose of this course is to help the student learn the general principles of object-oriented programming, including how to design, implement, document, test, and debug computer programs. The course is based on the JAVA programming language.

Instructors

Res. Asst. Dr. Ayşe Berna ALTINEL GİRGİN (MB342 – berna.altinel@marmara.edu.tr)
Res. Asst. M. Umut İZER (MA219 - umut.izer@marmara.edu.tr)

Course Contents

An introduction to the process of program design and analysis for students who have no prior programming experience. Topics to be covered include basic data types and their operators, expressions and assignment statements, I/O, control structures (selection, loops), classes (including methods and fields), arrays, functions and procedures, files.

Planned Learning Activities and Teaching Methods

Lecture notes, PowerPoint presentations, Homework, Lab work, Hands on application, Projects.

Work Placement(s)

none

Language of Instruction

English

Recommended or Required Reading

Introduction to JAVA Programming Comprehensive Version 9th Edition, by Daniel J. Liang, Prentice Hall, 2007. Java How to Program, Eighth Edition, by P. Deitel & H. Deitel, Prentice Hall, 2009. Java Software Solutions, 4th Edition, by J. Lewis & W. Loftus, Addison Wesley, 2004.

Webpage of Course

http://mimoza.marmara.edu.tr/~umut.izer/CSE143 Computer Programming for IE.htm

Learning Outcomes

1. Assess how Java programs are created, compiled, and run. Distinguish and debug syntax errors, runtime errors, and logic errors.
2. Use selection, control and repetition structures.
3. Design and implement methods.

4. Know the structure of arrays and how to process, search and sort the contents of arrays.
5. Design programs using the object-oriented paradigm. Use UML graphical notations to describe classes and objects.

Weekly Detailed Course Contents

Week	Theoretical
1	Introduction to Computer Systems
2	Introduction to Programs and Java
3	Elementary Programming 1
4	Elementary Programming 2
5	Selection
6	Mathematical Function, Characters and String
7	Loops
8	Midterm exam
9	Methods
10	Single-dimensional arrays
11	Multi-dimensional arrays
12	Objects and classes
13	Object oriented thinking
14	Inheritance
15	Polymorphism
16	Final Exam Study
17	Final Exam