ESTONIAN
ENTREPRENEURSHIP UNIVERSITY
OF APPLIED SCIENCES

Object oriented programming (SE-011)

(OBJEKTORIENTEERITUD PROGRAMMEERIMINE)

SUBJECT DESCRIPTION

Credits (ECTS)	5.00 ECTS
Assessment	grading

Aim of the subject and short description

This course broadens and deepens programming skills through object-oriented approach. It defines object type and shows how to create new object types (classes) and objects of that type in Java language. Usage of class members and necessity of class implementation concealment and means thereof are explained. Subclasses generation technique and essence of related inheritance is described. Students learn to overload inherited methods in descendant class. Students are shown how to transform object to its base type and what implied polymorphism means. Students are taught to use standard packages, and main attention is paid to creation and usage of dynamic data structures. This course introduces Java input/output structure and possibilities of usage of object collections. Usage of exceptions is explained. Tools for creation of graphical user interface (GUI) and design principles are explained. Students are explained how to create parallel concurrent tasks in Java language and how to synchronize their work. Students learn to use tasks to create simple client-server applications.

Learning outcomes:

Student:

1. Knows basic terms of object-oriented programming
2. Can use various features of UML in documentation of objects, main processes and algorithms of domain area
3. Knows and is able to use built-in classes and their libraries in a programming language of his/her choice
4. Can derive new classes from given classes according to needs
5. Can engineer and implement small OOP solutions in a programming language of his/her choice