Course Descriptions None 2016-2017

Course Title	Programming
Course Code	EBC2016
ECTS Credits	6,5
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
2	31-10-2016	22-12-2016	L	X		X	

Level	Intermediate
Coordinator	Andre Berger For more information:a.berger@maastrichtuniversity.nl
Language of instruction	English
Goals	Students learn to design and implement algorithms in an object-oriented programming language (either C++ or Java). They learn all basic concepts of the programming language, including the implementation of simple classes and the usage of abstract data types as provided in the standard class library. Finally they learn the impact of the choice of data structures on the running time of an algorithm, and how to solve simple combinatorial optimisation problems.
Description	In the first part of the course students apply basic concepts of the programming language, including functions, selection structures, repetition and loop statements, data structures, and user-defined classes, in order to solve small programming tasks. In the second part the emphasis will be on how to analyse a programming task, how to design a solution and how to transform the solution into a program. Students get to know sorting algorithms and heuristics for simple combinatorial optimisation problems.
Literature	Robert Sedgewick, Kevin Wayne: 'Introduction to Programming in Java: An Interdisciplinary Approach', Pearson Education Limited, ISBN 978-1292025568.
Prerequisites	Analysis I, Linear Algebra, Optimisation, strong mathematical skills.
Teaching methods	PBL / Lecture / Assignment / Groupwork
Assessment methods	Participation / Written Exam
Evaluation in previous academic year	For the complete evaluation of this course please click http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM

This course belongs to the following programme / specialisation

Bachelor Econometrics and Operations Research	Year 2 Compulsory Courses