

## Course Descriptions None 2024-2025

Course Title Fundamentals of Programming  
Course Code EBC2198  
ECTS Credits 6,5  
Assessment Whole/Half Grades

Period	Start	End	Mon	Tue	Wed	Thu	Fri
1	2-9-2024	20-10-2024	X	X		X	

Level Intermediate  
Coordinator Andre Berger For more information:a.berger@maastrichtuniversity.nl  
Language of instruction English

Goals This course will introduce you to the fundamentals of computer programming. It is designed for students with no prior programming experience. The goals of the course are to learn how to use the fundamental building blocks of a programming language and to get practice in the several steps of algorithm and software development. By the end of the course you should have a strong understanding of the fundamentals of Computer Science and the Java programming language.

- \* Students understand the basic principles of computer programming and data structures.
- \* Students apply their programming skills to translate a verbal assignment into computer language.
- \* Students analyse the performance of their solutions through experimentation.
- \* Students select appropriate programming techniques for verbal assignments.
- \* Students explain the structure and methods of their programming solutions.
- \* Students develop programs and discuss these in teams, with the aim of improving programs in terms of clarity and efficiency.

Description You will first learn the basic principles of programming: data types, variables, statements, assignments, control statements, loops, file input/output, arrays, methods, objects, classes, etc. We will use Java, a high level, cross-platform, and well-constructed computer programming language to demonstrate those principles. Further, you will acquire skills and get practice in the several steps of basic algorithm and software development: from a description of the problem, to an idea about an approach and justified data structures, and finally the translation of the approach into an implemented programme.

Formative assessment: Feedback by tutors on programming skills and assignments  
Summative assessment: Exam and assignments  
Instructional approach: Lectures, tutorials, and assignments

Literature Recommended literature : introductory textbooks on JAVA Programming (examples listed in course manual).  
Prerequisites Analysis I, Linear Algebra, Optimisation, strong mathematical skills.

Keywords  
Teaching methods PBL / Lecture / Assignment / Groupwork  
Assessment methods Attendance / Participation / Written Exam / Assignment

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 Business Analytics Year 2 Compulsory Course(s)