## Computer Science, MSc

**Name of Faculty:** Faculty of Mechanical Engineering, Informatics and Electrical Engineering  
**Name of qualification and level:** Computer Science, MSc  
**Duration of studies:** 4 semesters  
**Intake:** September

### Introduction to programme

The programme brings its active and motivated students to professional level in either artificial intelligence, computational modelling, and high performance computing. The programme prepares the students to scientific research in international research and innovation teams, development work in industry, and/or professional work in industry and other sectors.

### Who is the programme aimed at?

The MSc program is designed for students and professionals holding bachelor degrees (BSc) in informatics, applied mathematics, and some computation oriented engineering programmes. The program is designed to accommodate full-time students only.

### Specialization

None.

### Structure of studies

The first year students have compulsory courses only in the fields of basic mathematical technologies (numerical methods in linear algebra and optimization), Python programming, concept of digital twins and high performance computing. In the second and third semester, beside compulsory courses on information technologies (machine learning, computer networks, web technologies), students can select between diving into deep learning or computational modelling of physical phenomena.

A key element of the programme is the consecutive, compulsory project work in the 2nd and 3rd semester and the thesis work in the 4th semester. At the beginning of this chain several industrial and research challenges will be posed to students and they will elaborate one of them upon their selection with active work together with their internal and external supervisors. Here project work will be requested from the students in international research and innovation projects (see e.g. HiDALGO-project), in university excellence projects, or industrial projects with industrial companies in artificial intelligence, automotive industry, and other sectors.

The total number of credits needed to complete the programme is 120 credits. 1 credit equals one ECTS credit, and 1 credit equals working hours.

### Language requirements

English as a primary language of instruction: automatic acceptance. Otherwise, one of the following indications of English-language proficiency: (a) TOEFL IBT test score of 66, or PBT score 513, (b) Cambridge First Certificate “B”, (c) IELTS score of 5.5 (d) any official certificate equal to the above mentioned.

### Academic requirements

BSc either in Computer Science, Mathematics, Applied Mathematics, Electrical Engineering.

### Tuition fee

€2500 / semester

### Application fee

€100 / application