

Mathematics for Computer Science

Subject area: Mathematics

University: TalTech
Level: MA1
Teaching mode: hybrid: some students participate online, other students attend real-life
Instructor(s): Silvio Capobianco

Short description

The course "Mathematics for Computer Science" follows the lines of the course of the same name taught at Massachusetts Institute of Technology. It is aimed at Master students of Computer Science, Information Technology, Business Informatics, and related disciplines. The course covers a series of topics from logic, set theory, discrete mathematics, and theory of computation, chosen from the first half of the textbook.

Full description

<http://www.cs.ioc.ee/~silvio/ITB8832/index.html>

Learning outcomes

At the end of the course, the learner will be able to: apply standard techniques of computer science in various contexts; understand the relevance and field of use of the mathematical structures at the base of computer science; and use mathematics for problem solving and for design and testing of software.

General information

Contact hours per week: 4
Total workload: (32 hours lecture hours + 32 hours exercise sessions) * 2.5 for attendance and personal study = 160 hours (in student hours for the whole course)
ECTS credits: 6
Language: English
Course start date: 29 August 2022
Course end date: 18 December 2022

Add. info about start date:	Date is tentative.
Weekly teaching day/time:	To be announced.
Time zone:	CET +1 (Estonia, Israel)
Further information:	Information on the course may change according to various factors. The course web page will be kept up to date to reflect these changes.
Prerequisites:	Calculus and algebra, first-year BSc level. Basic combinatorics and probability are a useful addition.
Activities and methods:	Lectures, Group work, Self-study, Exercises, Weekly self-evaluation exercises
Presence on campus:	Presence on campus is not required.

Final examination

Form:	assignment
Date:	
Location/format:	online
Re-sit possibility:	yes
Transcript available:	end of semester
Add. info/requirements:	Three dates will be scheduled and one retake is allowed. Admission to final exam requires a minimum score from three midterm tests. Further information on the course web page.

Registration

To register for this course, follow the registration requirements of your **home university** as specified here: www.euroteq.eu/courses-registration.

Administration

Number of places:	6
Minimum participants:	No minimum
Internal course code:	ITB8832
Contact:	Email silvio.capobianco@taltech.ee

This course is part of the EuroTeQ Engineering University joint course catalogue 2022/2023. This is a collaborative activity of the partner universities DTU, L'X, TU/e, TalTech, CTU, TUM as well as Technion. Students from these universities can participate in the offered courses. It is the responsibility of the student to check if you fulfil the requirements to participate in a specific course. Students are also advised to check with their home institution how to get recognition of the ECTS credits gained in courses of the EuroTeQ course catalogue. For further information about EuroTeQ Engineering University, visit www.euroteq.eu or get in touch with the above-mentioned point of contact.