Course syllabus

Programmering
Programming, First Course

EDAA65, 6 credits, G1 (First Cycle)

Valid for: 2023/24
Faculty: Faculty of Engineering, LTH
Decided by: PLED C/D
Date of Decision: 2023-04-18

General Information

Main field: Technology.
Language of instruction: The course will be given in Swedish

Aim

The students shall learn how to write small and medium-sized computer programs and attain basic knowledge of object-oriented programing and the programming language Java.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

- be able to explain fundamental concepts in object-oriented programming
- be able to explain and give examples of use of fundamental algorithms, e.g., for searching
- be able to describe and give examples of use of fundamental data structures such as arrays and matrices

Competences and skills
For a passing grade the student must

- be able to develop and implement algorithms so solve simple problems
- be able to implement Java classes, starting from given specifications
- be able to use tools to write, test and debug programs
- be able to read program code and program documentation

Judgement and approach
For a passing grade the student must

• be able to go further on his own in the field of object-oriented programming

Contents

Programs as models of real systems. Objects and operations, classes and methods. Basic Java programming, fundamental algorithms. Data structures: arrays, the class ArrayList. Inheritance, polymorphism. String classes.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)
Assessment: For final grades, approved compulsory course items and an approved written exam are required. In order to participate in the exam, the compulsory course items must be completed. The final grade for the course is based on the result of the written examination.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0117. **Name:** Compulsory Course Items.
Credits: 3. **Grading scale:** UG. **Assessment:** Approved programming assignments. **Contents:** Programming assignments.
Code: 0217. **Name:** Programming, Written Examination.
Credits: 3. **Grading scale:** TH. **Assessment:** Approved examination. **Contents:** Written examination. **Further information:** The final grade of the course is based on the result of the written examination. To qualify for the the written examination, students must have completed the compulsory course items.

Admission

The number of participants is limited to: No
The course overlaps following course/s: EDA501, EDA010, EDA011, EDA015, EDA016, EDA017, EDA390, EDA500, EDA616, EDA618, EDAA10, EDAA20, EDAA50, EDAA55, EDAA45, EDAA70

Reading list

• Allen B. Downey & Chris Mayfield: Think Java, How to Think Like a Computer Scientist. O'Reilly, 2019, ISBN: 9781492072508. Second edition. The authors maintains an online version at https://greenteapress.com/wp/think-java-2e/.

Contact and other information

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