



COURSE SYLLABUS

Foundations of Programming, 7.5 credits

Grundläggande programmering, 7,5 högskolepoäng

Course Code: TGPG14	Education Cycle: First-cycle level
Confirmed by: Dean Mar 1, 2024	Disciplinary domain: Technology
Revised by: Director of Education Apr 30, 2024	Subject group: IF1
Valid From: Aug 1, 2024	Specialised in: G1N
Version: 2	Main field of study: Informatics

Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding

- display knowledge and understanding of basic concepts of programming like variables, data types, iterations, conditional statements and functions
- display knowledge of core concepts of object-orientation
- show familiarity with the possibilities, limitations and current uses of JavaScript

Skills and abilities

- demonstrate the ability to troubleshoot and identify basic programming errors
- demonstrate the ability to autonomously solve a given problem and choose a suitable method.

Contents

The course includes modules giving theoretical as well as practical skills for developing modern JavaScript applications.

The course includes the following elements:

- Basic concepts of programming in JavaScript
- Object-oriented programming in JavaScript
- Event-driven programming
- Git and GitHub

Type of instruction

Lectures, workshops, and assignments

The teaching is conducted in English.

Prerequisites

General entry requirements and Matematik 2a or 2b or 2c. Proof of English proficiency is required (or the equivalent).

Examination and grades

The course is graded 5,4,3 or Fail.

Registration of examination:

Name of the Test	Value	Grading
Examination [†]	5 credits	5/4/3/U
Assignment	2.5 credits	U/G

[†] Determines the final grade of the course, which is issued only when all course units have been passed.

Course literature

The literature list for the course will be provided 8 weeks before the course starts.

Titel: *Learn JavaScript with p5.js* (First edition)

Författare: Engin Arshlan

Förlag: APress

ISBN: 9781484234259

McCarthy, L., Reas, C., & Fry, B. (2015). *Getting started with p5.js* (First edition.). Maker Media.
(https://primo.library.ju.se/permalink/46JUL_INST/1kh77vo/alma998372977903831)

Eloquent JavaScript (4th Edition)

<https://eloquentjavascript.net> (online book)