# COURSE DETAIL

## COMPILER DESIGN I

**Country**
Sweden

**Host Institution**
Uppsala University

**Program(s)**
Uppsala University

**UCEAP Course Level**
Upper Division

**UCEAP Subject Area(s)**
Computer Science

**UCEAP Course Number**
115

**UCEAP Course Suffix**

**UCEAP Official Title**
COMPILER DESIGN I

**UCEAP Transcript Title**
COMPILER DESIGN I

**UCEAP Quarter Units**
4.00

**UCEAP Semester Units**
2.70

**Course Description**

This course covers how simple imperative programming languages equivalent to C can be compiled to machine code for RISC-like machines. The course covers the following: Lexical analysis (scanning); Syntactical analysis (parsing); Program representation in Abstract Syntax Trees (AST); Symbol tables and scope rules for C-like languages; Type-checking for C-like languages; Different forms of intermediate code (IR); Generation of intermediate code; Call stacks and activation posts; Code generation for RISC-like machines; Basic blocks, control-flow graphs, liveness analysis, register allocation.

**Language(s) of Instruction**

English

**Host Institution Course Number**

1DL321

**Host Institution Course Title**

COMPILER DESIGN I

**Host Institution Campus**

Faculty of Science and Technology

**Host Institution Faculty**

**Host Institution Degree**

**Host Institution Department**

Information Technology

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