

COURSE DETAIL

ADVANCED FUNCTIONAL PROGRAMMING

Country

Netherlands

Host Institution

Utrecht University

Program(s)

Utrecht University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

178

UCEAP Course Suffix**UCEAP Official Title**

ADVANCED FUNCTIONAL PROGRAMMING

UCEAP Transcript Title

ADVANCED PROGRAMMIN

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course builds upon knowledge gained in introductory courses on functional programming, languages, and compilers. Using Haskell as the course's language of choice, students look at several advanced functional programming techniques, patterns, libraries, and tools. Course includes lectures, assignments, joint discussions, and programming exercise. Topics covered include: development of tools, testing, debugging and profiling; libraries of data structures, programming languages, monads, monad transformers, arrows, and applicative functors; language features and extensions of multi-parameter type classes and functional dependencies, type families, kinds, generalized algebraic data types (GADTs), existential types, and higher-rank polymorphism. ❌

Language(s) of Instruction

English

Host Institution Course Number

INFOAFP

Host Institution Course Title

ADVANCED FUNCTIONAL PROGRAMMING

Host Institution Campus

Utrecht

Host Institution Faculty

Faculty of Science

Host Institution Degree

Host Institution Department

Graduate School of Natural Sciences

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