COURSE DETAIL

INTRODUCTION TO STRUCTURED VLSI DESIGN

Country
Sweden

Host Institution
Lund University

Program(s)
Lund University

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Electrical Engineering Computer Science

UCEAP Course Number
122

UCEAP Course Suffix

UCEAP Official Title
INTRODUCTION TO STRUCTURED VLSI DESIGN

UCEAP Transcript Title
STRUCTURED VLSI

UCEAP Quarter Units
6.00

UCEAP Semester Units
4.00

Course Description
The course focuses on very-large-scale integrated (VLSI) digital circuit realization, targeting for fast prototyping on an FPGA platform. Students learn how to implement typical blocks of a large digital system, e.g., state machines, data-path, etc. Moreover, students are taught to optimize a digital implementation, mainly on the architecture level, for area, speed, and power. Basic knowledge of design for test (DFT) is covered to provide good understanding of a complete digital VLSI design flow. The knowledge gained during the lectures is implemented through practical assignments in the lab. The course teaches the basic concept of VHDL and tool training required for the compulsory assignments, i.e., Sequence Detector, ALU, and a Keyboard Controller. Based on the experience gained through compulsory assignments, the students may continue with a small project.

Language(s) of Instruction
English

Host Institution Course Number
EITF35

Host Institution Course Title
INTRODUCTION TO STRUCTURED VLSI DESIGN

Host Institution Campus
Engineering

Host Institution Faculty

Host Institution Degree

Host Institution Department
Engineering- Electrical and Information Technology

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