COURSE DETAIL

FORMAL LANGUAGES AND AUTOMATA
Country Germany
Host Institution Technical University Berlin
Program(s) Technical University Berlin
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 134
UCEAP Course Suffix
UCEAP Official Title FORMAL LANGUAGES AND AUTOMATA
UCEAP Transcript Title FORML LANG&AUTOMATA
UCEAP Quarter Units 5.50
UCEAP Semester Units 3.70

Course Description

This course covers the basics of mathematical and logical foundations of theoretical computer science and the distinction between syntax and semantics. Students acquire the ability of structured reasoning in the sense of carrying out simple mathematical proofs, and they are able to apply simple abstraction techniques to switch between propositions at different levels of abstraction. They master the treatment of formal languages with their counterparts of grammars, finite automata, and push-down automata. Course topics include sets, logical propositions, proof notation, and proof techniques; relations, orders, maps, equivalences, quotients, and cardinality; words, languages, and expressions; Chomsky-hierarchy, grammars, and syntax trees; automata, push-down automata, and pumping lemma; and non-determinism.

Language(s) of Instruction
German

Host Institution Course Number
0401 L 155, 0401 L 155/2

Host Institution Course Title
FORMALE SPRACHEN UND AUTOMATEN

Host Institution Campus

Host Institution Faculty
FAKULTÄT IV ELEKTROTECHNIK UND INFORMATIK

Host Institution Degree

Host Institution Department
Softwaretechnik und Theoretische Informatik

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