

# Course Manual THI

Theoretical Computer Science

Version: 4 | Last Change: 25.01.2020 18:24 | Draft: 0 | Status: vom verantwortlichen Dozent freigegeben

## – General information

<b>Long name</b>	Theoretical Computer Science
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<b>Approving CModule</b>	<a href="#">THI MaTIN</a>
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<b>Responsible</b>	Prof. Dr. Hubert Randerath Professor Fakultät IME
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<b>Valid from</b>	summer semester 2021
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<b>Level</b>	Master
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<b>Semester in the year</b>	summer semester
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<b>Duration</b>	Semester
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<b>Hours in self-study</b>	78
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<b>ECTS</b>	5
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<b>Professors</b>	Prof. Dr. Hubert Randerath Professor Fakultät IME
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<b>Requirements</b>	Basics in automata theory and formal languages
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<b>Language</b>	German
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<b>Separate final exam</b>	Yes
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### Literature

### Final exam

<b>Details</b>	oral exam
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<b>Minimum standard</b>	Master of basic course topics must be shown
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<b>Exam Type</b>	EN mündliche Prüfung, strukturierte Befragung
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## – Lecture / Exercises

### Learning goals

Goal type	Description
Skills	An algorithm's complexity can be determined by analyzing its input and the algorithmic core, e.g., by means of the O-notation. The analysis might consist of a polynomial reduction of a known hard problem like the satisfiability problem in propositional logic of the unknown problem.

### Special requirements

none

### Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Exercises (whole course)	2
Exercises (shared course)	0
Tutorial (voluntary)	0

### Accompanying material

- Theoretische Informatik, J. Hromkovic, Teubner-Verlag  
- Theoretische Informatik - kurzgefasst, U. Schöning, Spektrum-Verlag  
- Theoretische Grundlagen der Informatik, R. Solcher, Hanser-Verlag

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<b>Separate exam</b>	No
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