## Module Description

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<th>Module title</th>
<th>Abbreviation</th>
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<tr>
<td>Tutorial Foundations Algorithms and Data Structures</td>
<td>10-I-GADST-141-m01</td>
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### Module Coordinator
Dean of Studies Informatik (Computer Science)

### Module Offered by
Institute of Computer Science

### ECTS
5

### Method of Grading
Only after succ. compl. of module(s)

### Duration
1 semester

### Module Level
Undergraduate

### Contents
Design and analysis of algorithms, recursion vs. iteration, sort and search methods, data structures, abstract data types, lists, trees, graphs, basic graph algorithms, programming in Java.

### Intended Learning Outcomes
The students are able to independently design algorithms as well as to precisely describe and analyse them. The students are familiar with the basic paradigms of the design of algorithms and are able to apply them in practical programs. The students are able to estimate the run-time behaviour of algorithms and to prove their correctness.

### Courses
Ü (no information on SWS (weekly contact hours) and course language available)

### Method of Assessment

a) completion of approx. 11 exercise sheets with approx. 4 exercises per sheet (50% of exercises to be completed correctly) or b) written examination (approx. 180 to 240 minutes). Method of assessment to be selected by the candidate.

### Allocation of Places
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### Additional Information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

### Module Appears In
Bachelor’ degree (1 major) Business Information Systems (2014)