Module title
Algorithms and Data Structures for students of Space- and Aerospace Computer Science

Abbreviation
10-I-ADS-LRI-092-m01

Module coordinator
Dean of Studies Informatik (Computer Science)

Module offered by
Institute of Computer Science

ECTS
10

Method of grading
numerical grade

Duration
1 semester

Module level
undergraduate

Other prerequisites
Admission prerequisite to assessment: exercises (type and scope to be announced by the lecturer at the beginning of the course).

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
V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment
written examination (approx. 80 to 90 minutes). If announced by the lecturer by four weeks prior to the examination date, the written examination can be replaced by an oral examination of one candidate each or an oral examination in groups. A 80 to 90 minute written examination is equivalent to a 20 minute (approx.) oral examination of one candidate each, a 30 minute (approx.) oral examination in groups of 2 and a 40 minute (approx.) oral examination in groups of 3.

Allocation of places
--

Additional information
--

Referred to in LPO I
(examination regulations for teaching-degree programmes)

Module appears in
Bachelor' degree (1 major) Aerospace Computer Science (2009)
Bachelor' degree (1 major) Aerospace Computer Science (2011)