Module title	Abbreviation
Computer Science for Space Engineering	10-I=CSSE1-182-m01

Module coordinator	Module offered by
holder of the Chair of Computer Science VII	Institute of Computer Science

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	graduate	--

Contents

The topics of this course cover the broad spectrum that is needed for programming satellite systems. This includes close-to hardware programming as well as high level topics such as virtual machines and concurrency. Algorithms and data structures form the frame, where the special topics of computer science for space engineering are taught.

Intended learning outcomes

In this lecture the students should learn advanced concepts of computer science. In addition to low-level programming and programming in C and C++, object oriented syntax and semantics of programming languages and efficient data structures are in focus of the course. In practical programming tasks/assignments within this module, students will be made familiar with virtual machines, such that they are enabled to set up their own virtual machine for a satellite system.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)
Module taught in: English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 90 to 120 minutes)
Language of assessment: English
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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

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Module appears in

Master's degree (1 major) Satellite Technology (2018)