Module title			Abbreviation
Energy-Aware Engineering			10-I-EnAE-212-m01

Module coordinator	Module offered by
holder of the Chair of Computer Science XI	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	undergraduate	--

Contents

In this module we learn about methods and metrics to evaluate energy demand and energy efficiency of technical systems. We study energy-aware mechanisms for transmitting data (for example, sensor data in the Internet of Things) and for operating technical systems (such as data centers and computer clouds).

Intended learning outcomes

The students are able to analyze and optimize technical systems with respect to their energy demands.

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

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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. 60 to 120 minutes)
if announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

Teaching cycle: every year, summer semester

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

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Module appears in

Bachelor's degree (1 major) Computer Science and Sustainability (2021)
Bachelor's degree (1 major) Computer Science and Sustainability (2025)