Module title | Automation and Control Technology
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Abbreviation | 10-I-AR-152-m01

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

<table>
<thead>
<tr>
<th>ECTS</th>
<th>Method of grading</th>
<th>Only after succ. compl. of module(s)</th>
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<tbody>
<tr>
<td>8</td>
<td>numerical grade</td>
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<tr>
<th>Duration</th>
<th>Module level</th>
<th>Other prerequisites</th>
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<tbody>
<tr>
<td>1 semester</td>
<td>undergraduate</td>
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Contents
Overview of automation systems, foundations of control technology, simple design methods, model creation, differential equations, nomenclature, transfer function, step response and realising of easy linear controllers, structure images and structure image reduction, locus curves and Bode diagrams, frequency characteristic, persistent control deviation, controller design through parameter optimisation, basics of fuzzy control, scanning systems, eigenvalue based system analysis, classification of automation and control systems, examples.

Intended learning outcomes
The students master the fundamentals of automation and control.

Courses
(type, number of weekly contact hours, language — if other than German)
V (4) + Ü (2)

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).
Language of assessment: German and/or English creditable for bonus

Allocation of places
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Additional information
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Referred to in LPO I
( examination regulations for teaching-degree programmes)
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Module appears in
Bachelor’ degree (1 major) Mathematics (2015)
Bachelor’ degree (1 major) Computational Mathematics (2015)
Bachelor’ degree (1 major) Aerospace Computer Science (2015)
Bachelor’ degree (1 major) Aerospace Computer Science (2017)