Module title: Discrete Event Simulation

Abbreviation: 10-I=ST-161-m01

Module coordinator: holder of the Chair of Computer Science III

Module offered by: Institute of Computer Science

ECTS: 8

Method of grading: numerical grade

Duration: 1 semester

Module level: graduate

Contents:
Introduction to simulation techniques, statistical groundwork, creation of random numbers and random variables, random sample theory and estimation techniques, statistical analysis of simulation values, inspection of measured data, planning and evaluation of simulation experiments, special random processes, possibilities and limits of model creation and simulation, advanced concepts and techniques, practical execution of simulation projects.

Intended learning outcomes:
The students possess the methodic knowledge and the practical skills necessary for the stochastic simulation of (technical) systems, the evaluation of results and the correct assessment of the possibilities and limits of simulation methods.

Courses:
- V (4) + Ü (2)

Method of assessment:
- 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:
Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits):
- IT, IS, ES, GE

Referred to in LPO I (examination regulations for teaching-degree programmes):
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Module appears in:
- Master's degree (1 major) Computer Science (2016)
- Master's degree (1 major) Mathematics (2016)
- Master's degree (1 major) Computational Mathematics (2016)
- Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
- Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
- Master's degree (1 major) Computer Science (2017)
- Master's degree (1 major) Computer Science (2018)
- Master's degree (1 major) Computational Mathematics (2019)
- Master's degree (1 major) Mathematics (2019)
- Master's degree (1 major) Information Systems (2019)
- Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)
- Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)
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<tr>
<td>Master's degree (1 major) Aerospace Computer Science (2020)</td>
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<tr>
<td>Master's degree (1 major) eXtended Artificial Intelligence (xtAI) (2020)</td>
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