Module title			Abbreviation
Rocket Propulsion			10-LURI=RP-232-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

- Introduction to Space Transportation and Liquid Rocket Propulsion
- Basics of Mathematical Modeling
- Modeling Examples in Space Transportation / Liquid Rocket Propulsion
- Basics of Rocket Engine Control and Condition Monitoring Systems
- Modern Approaches to Rocket Engine Control
- Rocket Engine Test Facilities
- Current & Future Developments

Intended learning outcomes

Students understand the basics of liquid rocket propulsion. They know the challenges related to the modeling of essential processes and the control of modern pump-fed rocket engines. They have learned about the operation of rocket engine test facilities and are aware of current developments.

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

V (2) + Ü (2)
Module taught in: German and/or 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. 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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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) Aerospace Computer Science (2023)