Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

Annex SFB

Studienfachbeschreibung (subject description, SFB) for Module studies (Bachelor) Computer Science

Responsible: Faculty of Mathematics and Computer Science — Examination regulations version: 2019
Responsible: Institute of Computer Science — Examination regulations version: 2019

Abbreviations used:

Course types: **E** = field trip, **K** = colloquium, **O** = conversatorium, **P** = placement/lab course, **R** = project, **S** = seminar, **T** = tutorial, **Ü** = exercise, **V** = lecture

Term: **SS** = summer semester, **WS** = winter semester

Methods of grading: **NUM** = numerical grade, **B/NB** = (not) successfully completed

Regulations: **(L)ASPO** = general academic and examination regulations (for teaching-degree programmes), **FSB** = subject-specific provisions, **SFB** = list of modules

Other: **A** = thesis, **LV** = course(s), **PL** = assessment(s), **TN** = participants, **VL** = prerequisite(s)

Conventions for the modules in this SFB:

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Information on assessment procedures:

Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

Should a module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

In accordance with the general regulations governing the degree subject described in this module catalogue:

associated official publications (FSB (subject-specific provisions)/SFB (list of modules)):

15-May-2019 (2019-36)

27-Jun-2019 (2019-41)

14-Nov-2019 (2019-52)

22-Jan-2020 (2020-13)

06-May-2020 (2020-39)

22-Jul-2020 (2020-57)

17-Dec-2020 (2020-110)

10-Mar-2021 (2021-17)

09-Jun-2021 (2021-58)

22-Dec-2021 (2021-85)

05-Jul-2022 (2022-52)

31-Jan-2023 (2022-86)

15-Jun-2023 (2023-58)

13-Dec-2023 (2023-107)

07-Aug-2024 (2024-82)

22-Jan-2025 (2025-1)

09-Jul-2025 (2025-75)

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.

Every module will be described using the following form:

Abbreviation	**Module title**							
	ECTS		Duration	(in semesters)	Method of grading		Module level	
	Courses	To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y						
	Method of assessment							
	Only after successful completion of	if applicable						
	Other prerequisites	if applicable						
	Participants and allocation of places	if applicable						
	Additional information	if applicable						
	Referred to in LPO I	if applicable (examination regulations for teaching-degree programmes)						

Summer Term 2019 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					
10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
Winter Term 2019 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					

10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					
10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					

10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
Summer Term 2020 (0 ECTS credits)								
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
Winter Term 2020 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

Summer Term 2021 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

Winter Term 2021 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

Summer Term 2022 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

Winter Term 2022 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

Summer Term 2023 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					

10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					
10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
Winter Term 2023 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

Summer Term 2024 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-191-m01	**Control Principles of Modern Communication Systems**							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					

Winter Term 2024 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-PV-152-m01	**Project Presentation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SWP-152-m01	**Practical course in software**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1 d)					
10-I-SKS-242-m01	**Control Principles of Modern Communication Systems**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					

Summer Term 2025 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-GI-152-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-172-m01	**Aerospace Laboratory**							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					
10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-172-m01	**Practical work Space Technology**							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					

10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
10-I-SKS-242-m01	**Control Principles of Modern Communication Systems**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
Winter Term 2025 (0 ECTS credits)								
10-I-AGT-152-m01	**Algorithmic Graph Theory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-GI-252-m01	**Selected Basics of Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: German or English					
	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					
10-I-APR-172-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-HWP-152-m01	**Practical course in hardware**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEC-191-m01	**IT Security**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	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					
10-I-LRLA-252-m01	**Aerospace Laboratory**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + P (2)					
	Method of assessment		Completion of approx. 6 practical exercises (approx. 4 hours each)					

10-I-HMR-152-m01	**Practical Measurement and Control System Engineering**							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)					
10-I-PLR-252-m01	**Practical work Space Technology**							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work					
10-I-PP-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					
10-I-SEM1-152-m01	**Seminar - Selected Topics in Computer Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	**Seminar - Selected Topics in Computer Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					

10-I-SKS-242-m01	**Control Principles of Modern Communication Systems**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + 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					