Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Artificial Intelligence & Extended Reality as a Master's with 1 major

with the degree "Master of Science" (120 ECTS credits)

Responsible: Faculty of Mathematics and Computer Science — Examination regulations version: 2024
Responsible: Institute of Computer Science — Examination regulations version: 2024

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:

ASPO2015

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

31-Jan-2024 (2024-8)

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)						

Compulsory Courses (35 ECTS credits)								
10-xtAI=L1-242-m01	**AI&XR Lab 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		R (3) Module taught in: English					
	Method of assessment		Project: report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic Language of assessment: English Creditable for bonus					
10-xtAI=L2-242-m01	**AI&XR Lab 2**							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		R (6) Module taught in: English					
	Method of assessment		Project: report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic Language of assessment: English Creditable for bonus					
10-xtAI=L3-242-m01	**AI&XR Lab 3**							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		R (6) Module taught in: English					
	Method of assessment		Project: report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic Language of assessment: English Creditable for bonus					
10-xtAI=IAI-202-m01	**Introduction in AI**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					

10-xtAI=M-L1-242-m01	**Machine Learning**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
Electives Field (55 ECTS credits)								
AI&XR Seminars (min. 5 to max. 10 ECTS credits)								
10-xtAI=SEM1-242-m01	**Seminar 1 - Artificial Intelligence & Extended Reality**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		S (2) Module taught in: English					
	Method of assessment		Term paper (10 to 15 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic Language of assessment: English Creditable for bonus					
10-xtAI=SEM2-242-m01	**Seminar 2 - Artificial Intelligence & Extended Reality**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		S (2) Module taught in: English					
	Method of assessment		Term paper (10 to 15 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic Language of assessment: English Creditable for bonus					
Core AI Methods (min. 10 to max. 35 ECTS credits)								
10-xtAI=DS1-202-m01	**Data Science 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					

10-xtAI=DS2-202-m01	**Data Science 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
10-xtAI=M-L2-242-m01	**Advanced Machine Learning**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
10-xtAI=NLP1-202-m01	**Natural Language Processing 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
10-xtAI=NLP2-202-m01	**Natural Language Processing 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					

10-xtAI=TAI1-202-m01	**Theory of Artificial Intelligence 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
10-xtAI=TAI2-202-m01	**Theory of Artificial Intelligence 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
10-AI=CV1-242-m01	**Computer Vision 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
10-AI=CV2-242-m01	**Computer Vision 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					

10-I=MLN1-232-m01	**Machine Learning for Networks 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English creditable for bonus					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,IT,SE,KI,HCI,IN					
10-I=MLN2-232-m01	**Machine Learning for Networks 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English creditable for bonus					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,IT,SE,KI,HCI,IN					
10-I=IP-222-m01	**Image Processing and Computational Photography**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					

10-I=RLCD-M-222-m01	**Reinforcement Learning and Computational Decision-Making**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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=M-NLP-222-m01	**Multilingual NLP**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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: English Creditable for bonus					
10-xtAI=AIM1-202-m01	**Selected Topics in AI Methods 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
10-xtAI=AIM2-202-m01	**Selected Topics in AI Methods 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					

Core XR Methods (min. 10 to max. 20 ECTS credits)								
10-HCI-PRIS-212-m01	**Principles of Interactive Systems**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus					
10-HCI-MMI-212-m01	**Multimodal Interfaces**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 90 minutes) or b) presentation of project results (approx. 30 minutes) or c) oral examination of one candidate each (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus					
10-HCI-3DUI-212-m01	**3D User Interfaces**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	Method of assessment		a) presentation of project results (approx. 30 minutes) or b) oral examination of one candidate each (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus					
10-xtAI=XR-M-202-m01	**Selected Topics in XR Methods**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: English					
	Method of assessment		a) Written examination (approx. 60 to 90 minutes) or b) Project: report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic or c) Oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups (max. 3 candidates, each approx. 15 minutes) Language of assessment: English Creditable for bonus					

AI&XR Application & Technologies (min. 10 to max. 25 ECTS credits)								
10-LU-RI=3D-202-m01	**3D Point Cloud Processing**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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-LURI=PHOTO-232-m01	**Photogrammetric Machine Vision**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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-LU-RI=AMS-232-m01	**Autonomous Mobile Systems**							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (4) + 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					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IT, KI, ES, LR, GE					

10-LU-RI=RO1-232-m01	**Robotics 1**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): KI, ES, LR, HCI, GE					
10-LU-RI=RO2-232-m01	**Robotics 2**							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (4) + Ü (2) + P (1) 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					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): KI, ES, LR, HCI, GE					
10-I=DB2-212-m01	**Databases 2**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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). creditable for bonus Language of assessment: German and/or English					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,KI,HCI					

10-I=DRLOC-221-m01	**Deep Reinforcement Learning for Optimal Control**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English creditable for bonus					
10-xtAI=SAC-202-m01	**Self-aware Computing**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
10-I=ICG-232-m01	**Interactive Computer Graphics**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI.					
10-xtAI=WPrak-t-242-m01	**Scientific Internship AI&XR**							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	graduate
	Courses		P (6)					
	Method of assessment		Report on practical course (approx. 10 pages) with presentation (30-45 min.) and subsequent discussion on the topic Language of assessment: German and/or English					
	Additional Information		8 Weeks					

10-xtAI=IS-S-242-m01	**International Summer School AI&XR**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		R (6) Module taught in: English					
	Method of assessment		a) Written examination (approx. 60 to 120 minutes) or b) Project: report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic or c) Oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups (max. 3 candidates, each approx. 15 minutes) Language of assessment: English					
	Additional Information		Project will be block taught, 4 - 6 weeks					
07-MLBI-202-m01	**Machine Learning in Bioinformatics**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English Creditable for bonus					
	Participants and allocation of places		10 places. Should the number of applications exceed the number of available places, places will be allocated by lot.					
10-xtAI=ST-242-m01	**Selected Topics in AI&XR Application & Technologies**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: English					
	Method of assessment		a) Written examination (approx. 60 to 90 minutes) or b) Project: report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic or c) Oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups (max. 3 candidates, each approx. 15 minutes) Language of assessment: English Creditable for bonus					

10-I=MIR-222-m01	**Music Information Retrieval**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 60 to 120 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes) Language of assessment: German and/or English Creditable for bonus					
	Additional Information		possible majors for MA 120 Computer Science: GE					
10-I=RRS-232-m01	**Remote Sensing**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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 EnglishCreditable for bonus					
	Additional Information		possible majors for MA 120 Computer Science: LR,IN					
Computer Science (min. 0 to max. 10 ECTS credits)								
10-I=ST-232-m01	**Discrete Event Simulation**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IT,KI,ES,GE,IN					

10-I=SSS-232-m01	**Security of Software Systems**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2) Module taught in: 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: English creditable for bonus					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,KI,LR, HCI, ES, SEC,IN					
10-I=DDB-172-m01	**Deductive Databases**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, SE, IT, IS.					
10-I=LP-212-m01	**Logic Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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). creditable for bonus Language of assessment: German and/or English					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,SE,IT,KI					

10-I=SB-212-m01	**Systems Benchmarking**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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). creditable for bonus Language of assessment: German and/or English					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,IT,ES,HCI,GE					
10-I=APR-212-m01	**Advanced Programming**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	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). creditable for bonus Language of assessment: German and/or English					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,KI,LR, HCI, ES,GE,SEC					
10-I=AKII-232-m01	**Selected Topics in Computer Science**							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü/S (2)					
	Method of assessment		a) written examination (approx. 60 to 120 minutes) or b) practical project (project documentation (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
Master Project Modules (30 ECTS credits)								
10-xtAI=MA-242-m01	**Master's Thesis AI&XR**							
	ECTS	25	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses							
	Method of assessment		Master-Thesis (50-100 S.) Language of assessment: English					
	Additional Information		Time to complete: 6 month					

10-xtAI=M-K-242-m01	**Concluding Colloquium AI&XR**							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	graduate
	Courses		K (0)					
	Method of assessment		Final colloquium (approx. 60 minutes) Language of assessment: English					