



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 Responsible: Institute of Computer Science Examination regulations version: 2024 Examination regulations version: 2024

Abbreviations used:	Course types: \mathbf{E} = field trip, \mathbf{K} = colloquium, \mathbf{O} = conversatorium, \mathbf{P} = placement/lab course, \mathbf{R} = project, \mathbf{S} = seminar, \mathbf{T} = tutorial, $\ddot{\mathbf{U}}$ = exercise, \mathbf{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 cre- ditable 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 me- thod 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)		Module level				
	Courses		To be spe	o be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y						
	Method of as	ssessme	ent							
	Only after su completion of		Il if applica	if applicable						
	Other prereq	uisites	if applica	if applicable						
	Participants and allocati- on of places		ocati- if applica	if applicable						
	Additional information		on if applica	if applicable						
	Referred to in	n LPO I	if applica	ble (examination re	gulations for teaching	g-degree programmes)				

Compulsory Cours	es (35 E	CTS cred	lits)							
10-xtAl=L1-242-	AI&XR	Lab 1								
m01	ECTS	ECTS 5 Duration			1 semester	Method of grading numerical grade	Modul level	graduate		
	Course	es	,	R (3) Modu	le taught in: English	1				
	Metho	d of ass	essment	Langu	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-xtAl=L2-242-	AI&XR	Lab 2	1							
m01	ECTS	10	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate		
	Courses			R (6) Modu	le taught in: English	1				
	Method of assessment			Langu	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-xtAl=L3-242-	AI&XR	Lab 3								
m01	ECTS	10	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate		
	Courses			R (6) Module taught in: English						
	Metho	d of ass	essment	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-xtAl=IAI-202-	IAI-202- Introduction in AI									
m01	ECTS	5	Duratio		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 candi- date). Language of assessment: English Creditable for bonus						

10-xtAl=M-	Mach	ine Learn	ing									
L1-242-m01	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cours	es			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 candi- date). Language of assessment: English Creditable for bonus								
Electives Field (55	ECTS cr	edits)										
AI&XR Seminars (n	nin. 5 to	o max. 10	ECTS cre	dits)								
10-	Semir	nar 1 - Art	ificial Int	elligen	ce & Extended Real	ity						
xtAl=SEM1-242- mo1	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses				Module taught in: English							
		od of asse		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- mo1	Seminar 2 - Artificial Intelligence & Extended Reality											
	ECTS 5 Duratio			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 Al Methods (n	nin. 10	to max. 3	5 ECTS ci	redits)								
10-xtAl=DS1-202-	Data S	Science 1										
m01	ECTS		Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + Ü (2) Module taught in: English									
	Method of assessment			lf ann of one date). Langu	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 candi-							

Master's with 1 major Artificial Intelligence & Extended Reality (2024)	JMU Würzburg • generated 30-Mär-2024 • exam. reg. data record 88 m12 - - H 2024	page 4 / 17

10-xtAl=DS2-202-	Data Science 2											
m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		V (2) + Modu	⊦ Ü (2) le taught in: English								
	Method of asse	comont										
	Method of asse	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 exar										
			of one	e candidate each (ar	oprox. 20 minutes) or	an oral examination in gro	ups of 2 candidates	s (approx. 15 minutes per candi-				
			date).	ate). anguage of assessment: English								
			Credit	Creditable for bonus								
10-xtAl=M-	Advanced Mac	Advanced Machine Learning										
L2-242-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		V (2) - Modu	⊦ Ü (2) le taught in: English	1							
	Method of asse	essment	If ann of one date).	/ritten examination (approx. 60 to 120 minutes) announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination f one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi-								
	Language of assessment: English Creditable for bonus											
10-xtAl=NLP1-202-	Natural Langua	age Proce	ssing	1								
m01	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		V (2) + Ü (2) Module taught in: English									
	Method of asse	essment										
								replaced by an oral examination s (approx. 15 minutes per candi-				
			date).		oprox. 20 minutes) of		ups of 2 candidates	applox. 15 minutes per candi-				
			Langu Credit	age of assessment: able for bonus	English							
10-xtAl=NLP2-202-	Natural Langua	age Proce	ssing :	2								
m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		V (2) +				Ň	*				
				le taught in: English								
	Method of asse	essment			rox. 60 to 120 minute		vamination may be	replaced by an oral examination				
								s (approx. 15 minutes per candi-				
			date).			U						
				age of assessment: able for bonus	English							

Master's with 1 major Artificial Intelligence & Extended Reality (2024)			
	Master's with 1 major Artificial Intelligence & Extended Reality (2024)	JMU Würzburg • generated 30-Mär-2024 • exam. reg. data record 88 m12 - - H 2024	page 5 / 17

10-xtAl=TAl1-202-	Theory of Artif	icial Intel	lligence 1								
m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (2) + Ü (2) Module taught in: English							
	Method of ass		If ann of one date). Langu Credit	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 candi- date). Language of assessment: English Creditable for bonus							
10-xtAl=TAl2-202-	Theory of Artificial Intelligence 2										
m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (2) + Ü (2) Module taught in: English							
	Method of ass		If ann of one date). Langu	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 candi- date). Language of assessment: English Creditable for bonus							
10-AI=CV1-242-	Computer Vision	on 1									
m01	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + Ü (2) Module taught in: English								
	Method of ass	essment	lf ann of one date). Langu	ounced by the lectu candidate each (ap	oprox. 20 minutes) of	of the course, the written		replaced by an oral examination 6 (approx. 15 minutes per candi-			
10-AI=CV2-242-	Computer Visi	on 2									
m01	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) - Modu	⊦ Ü (2) le taught in: English	1						
	Method of ass	essment	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 candi- date). Language of assessment: English Creditable for bonus								

Master's with 1 major Artificial Intelligence & Extended Reality (2024) [MU Würzburg • generated 30-Mär-2024 • exam. reg. data record 88/m12 - - H 2024 page 6 / 3			
	Master's with 1 major Artificial Intelligence & Extended Reality (2024)	JMU Würzburg • generated 30-Mär-2024 • exam. reg. data record 88 m12 - - H 2024	page 6 / 17

10-I=MLN1-232-	Machi	Machine Learning for Networks 1										
m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cours	es			V (2) + Ü (2) Module taught in: English							
	Metho	od of ass	essment	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 candi- date). 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											
10-I=MLN2-232-		ine Learr	ning for N		S 2							
m01	ECTS	5	Duratio		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 candi- date). 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	Duratio		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 candi- date). Language of assessment: English Creditable for bonus								

10-I=RLCD-	Reinforcement	Learning	and Computational Decision-Making								
M-222-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (2) + Ü (2) Module taught in: German and/or English							
	Method of asso	essment	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 candi- date). Language of assessment: German and/or English Creditable for bonus								
10-I=M-	Multilingual N	LP									
NLP-222-m01	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (2) + Ü (2) Module taught in: German and/or English							
	Method of asse		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 candi- date). Language of assessment: English Creditable for bonus								
10-xtAl=AlM1-202-	Selected Topic	1									
m01	ECTS 5 Duratio			1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + Ü (2) Module taught in: English								
	Method of asse	essment	If ann of one date). Langu	ounced by the lectu candidate each (ap	oprox. 20 minutes) or	of the course, the written e	examination may be r oups of 2 candidates	replaced by an oral examination 5 (approx. 15 minutes per candi-			
10-xtAl=AIM2-202-		s in Al Mo	ethods	2				•			
m01	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + Modu	⊦ Ü (2) le taught in: English	l						
	Method of assessment		If ann of one date). Langu	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 candi-							

Master's with 1 major Artificial Intelligence & Extended Reality (2024) [MU Würzburg • generated 30-Mär-2024 • exam. reg. data record 88/m12 - H 2024 page 8 / 1			
	Master's with 1 major Artificial Intelligence & Extended Reality (2024)	JMU Würzburg • generated 30-Mär-2024 • exam. reg. data record 88 m12 - - H 2024	page 8 / 17

Core XR Methods ((R Methods (min. 10 to max. 20 ECTS credits)										
10-HCI-PRIS-212-	Princip	les of Ir	teractive	Syste	ms						
m01	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	s	•		V (2) + Ü (2)						
			-		Module taught in: German and/or English						
	Metho	d of ass	essment		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-	Multim	nodal Int	erfaces								
m01	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S			+ Ü (2)	· · ·					
	-				odule taught in: German and/or English						
	Metho	d of asso	essment		a) written examination (approx. 90 minutes) or						
				b) pre	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						
				credit	able for bonus						
10-HCI-3DUI-212-	3D Use	er Interfa	ices								
m01	ECTS	5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		$V(2) + \ddot{U}(2)$							
					Module taught in: German and/or English						
	Metho	d of asso	essment	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-xtAl=XR-	Select	ed Topic	s in XR M	ethods	5						
M-202-m01	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	!S			+ Ü (2)						
				Module taught in: English							
	Metho	d of asso	essment	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							
						oups (max. 3 candidates, each approx. 15 mi	nutes)				
				Langu	lage of assessment						
				Credit	table for bonus						

AI&XR Application	& Techn	ologies	(min. 10	to max	. 25 ECTS credits)					
10-LU-	3D Poi	nt Cloud	Process	ng						
RI=3D-202-m01	ECTS	ECTS 5 Duration		1	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	S		V (2) · Modu	⊦ Ü (2) le taught in: Germar	n and/or English				
	Methoo	d of asse	essment	If ann of one date) Langu	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 candi- date). Language of assessment: German and/or English creditable for bonus					
10-LURI=PHO-	Photog	rammet	ric Mach	ine Vis	ion					
TO-232-m01	ECTS	5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	S		V (2) + Ü (2) Module taught in: German and/or English						
	Method of assessment			lf ann of one date) Langu	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 candi- date). Language of assessment: German and/or English Creditable for bonus					
10-LU-	Autonomous Mobile Systems									
RI=AMS-232-m01	ECTS	10	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	S		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 candi- date). Language of assessment: German and/or English Creditable for bonus						
	Additic	onal Info	rmation		es available for stuc ES, LR, GE	dents of the Master's	programme Informatik	(Computer Science, 120	DECTS credits):	

10-LU-	Roboti	Robotics 1											
RI=R01-232-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	!S			V (2) + Ü (2) Module taught in: German and/or English								
	Metho	d of asse	essment	If ann of one date).	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 candi- date). Language of assessment: German and/or English								
	Additic	onal Info	ormation		es available for stu , LR, HCI, GE	dents of the Master's	programme Informatik ((Computer Science, 120	ECTS credits):				
10-LU-	Robotics 2												
RI=RO2-232-mo1	ECTS 10 Duration				1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				+ Ü (2) + P (1) lle taught in: Germa	n 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 candi- date). 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	Databa	ises 2											
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	!S		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 candi- date). creditable for bonus Language of assessment: German and/or English									
	Additic	onal Info	rmation	Focus	es available for stu	dents of the Master's	programme Informatik ((Computer Science, 120	ECTS credits): SE,KI,HCI				

10-I=DRLOC-221-	Deep Reinf	Deep Reinforcement Learning for Optimal Control											
m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (2) + Ü (2) Module taught in: English									
	Method of	assessment	If ann of one date). Langu	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 candi- date). Language of assessment: English creditable for bonus									
10-xtAl=SAC-202-	Self-aware	Computing											
m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (2) + Ü (2) Module taught in: English									
Method of assessmentWritten examination (approx. 60 to 120 minutes)If announced by the lecturer at the beginning of the course, the written examination may be replace of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (appr date). Language of assessment: English Creditable for bonus													
10-l=lCG-232-m01	Interactive	Computer G	raphics										
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses		V (2) +										
	Method of	assessment	If ann of one date). Langu	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 candi- date). Language of assessment: German and/or English creditable for bonus									
	Additional	Information	Focus	es available for stud	dents of the Master's	programme Informatik (Compu	uter Science, 120	D ECTS credits): HCI.					
10-xtAl=WPrak-	Scientific I	nternship Ala	& XR										
t-242-m01	ECTS 10	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	graduate					
	Courses		P (6)										
		assessment	Langu	age of assessment:	e (approx. 10 pages) German and/or Eng	with presentation (30-45 min.) lish	and subsequen	t discussion on the topic					
	Additional	Information	8 Wee	eks									

10-xtAl=IS-	Interna	International Summer School AI&XR											
S-242-m01	ECTS	5	Duratior	า	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		R (6) Modi	Module taught in: English 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								
				b) Pro c) Or d) or Lang									
				,	ct will be block taug	ght, 4 - 6 weeks							
07-MLBI-202-m01	ļ		ning in Bio		matics	1			- 1				
	ECTS	5	Duratior		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			V (2) + Ü (2) Nodule 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 candi- date). Language of assessment: English Creditable for bonus									
	Particip cation		nd allo- es	10 places. Should the number of applications exceed the number of available places, places will be allocated by lot.									
10-xtAl=ST-242-	Selected Topics in Al&XR Application & Technologies												
m01	ECTS	5	Duratior	า	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2) + Ü (2) Module taught in: English									
	Method	l of ass		b) Pro c) Or d) or Lang	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	Informa	tion Retri	eval						
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	es			V (2) + Ü (2) Module taught in: German and/or English					
			essment	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						
			ormation	possi	ble majors for MA 1	20 Computer Science	: GE			
10-I=RRS-232-m01	Remot	te Sensi	ng							
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	es		V (2) + Ü (2) Module taught in: German and/or English						
	Metho	od of ass	essment	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 candi- date). Language of assessment: German and/or EnglishCreditable for bonus						
	Additi	onal Info	ormation	possible majors for MA 120 Computer Science: LR,IN						
Computer Science	(min. o	to max.	10 ECTS c	redits)						
10-l=ST-232-m01	Discrete Event Simulation									
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course			V (2) + Ü (2)						
	Metho	od of ass	essment	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 candi- date). Language of assessment: German and/or English creditable for bonus						
	Additi	onal Info	ormation		es available for stu S,GE,IN	idents of the Master's	programme Informatik (Comp	outer Science, 12	o ECTS credits):	

10-I=SSS-232-m01	Securit	Security of Software Systems											
	ECTS	5	Duratior	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S	·		V (2) + Ü (2) Module taught in: English 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 candi- date). Language of assessment: English creditable for bonus								
	Methoc	d of asse	essment	lf ann of one date). Langu									
	Additio	nal Info	rmation	Focus SEC,II		lents of the Master's	programme Informatik	(Computer Science, 120	ECTS credits): SE,KI,LR, HCI, ES,				
10-I=DDB-172-m01	Deduct	ive Data	bases										
	ECTS	5	Duratior	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		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 candi- date). 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		rogram	ming										
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	-		• • •	V (2) + Ü (2)								
	Methoc	d of asse	essment	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 candi- date). creditable for bonus Language of assessment: German and/or English									
	Additio	nal Info	rmation	Focus	es available for stuc	lents of the Master's	programme Informatik	(Computer Science, 120	ECTS credits): AT,SE,IT,KI				

10-l=SB-212-m01	Systems Bend	hmarking	•								
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) +	+ Ü (2)							
	Method of ass	sessment	lf ann of one date). credit	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 candi- date). creditable for bonus Language of assessment: German and/or English							
	Additional Inf	ormation		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 Pro	gramming	5								
	ECTS 5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) +	(2) + Ü (2)							
	Method of ass	sessment	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 candi- date). creditable for bonus Language of assessment: German and/or English								
	Additional Inf		ES,GE	,SEC	lents of the Master's	programme Informatik (Computer Science, 12	o ECTS credits): SE,KI,LR, HCI,			
10-I=AKII-232-m01	Selected Topics in Computer Science										
	ECTS 5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			+ Ü/S (2)							
	Method of ass	sessment	 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 Mod	lules (30 ECTS	credits)									
10-xtAl=MA-242-	Master's Thes	sis Al&XR									
m01	ECTS 25	Duratio	<u>1</u>	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses										
	Method of ass	sessment		er-Thesis (50-100 S.) lage of assessment:							
	Additional Inf	ormation	Time t	to complete: 6 mont	h						

Master's with 1 major Artificial Intelligence & Extended Reality (2024)	JMU Würzburg • generated 30-Mär-2024 • exam. reg. data record 88 m12 - - H 2024	page 16 / 17
,		

	Conclu	Concluding Colloquium AI&XR										
K-242-m01	ECTS	5	Duration	l	1 semester	Method of grading	(not) successfully completed	Modul level	graduate			
	Course	S		K (o)								
					Final colloquium (approx. 60 minutes) Language of assessment: English							