

Student ID Number

Degree Programm Number

EXAMINATION RASTER MASTER'S PROGRAM ARTIFICIAL INTELLIGENCE

(1.10.2019 - updated 1.10.2023)

Data of the Student

First name and Family name	
Phone number	
E-Mail	

Machine Learning and Perception [5]

Course	Code	Type	ECTS	Date	Grade
Deep Learning and Neural Nets I	993MLPEDN1U19	UE	1,5		
	993MLPEDN1V19	VL	3		
Deep Learning and Neural Nets II	993MLPEDN2U19	UE	1,5		
	993MLPEDN2V19	VL	3		
LSTM and Recurrent Neural Nets	993MLPELRNU19	UE	1,5		
	993MLPELRNV19	VL	3		
Computer Vision	921PECOCOBU20	UE	1,5		
	921PECOCOVV20	VL	3		
Theoretical Concepts of Machine Learning	993MLPETCMU20	UE	1,5		
	993MLPETCMV20	VL	3		
Probabilistic Models	921CGELPRMU13	UE	1,5		
	921COENPRMV13	VL	3		
Explainable AI	993MLPEEAIU20	UE	1,5		
	993MLPEEAIU20	VL	1,5		
Deep Reinforcement Learning	993MLPEDRLU20	UE	1,5		
	993MLPEDRLV20	VL	3		
34,5					

Seminar and Practical Training [10]

Course	Code	Type	ECTS	Date	Grade
Practical Work in AI (Master)	993SETPRWP19	PR	7,5		
Seminar in AI (Master)	993SEPTSAIS19	SE	3		
10,5					

AI and Society [15]

Course	Code	Type	ECTS	Date	Grade
AI and Law I	993AISOAL1V19	VL	3		
AI and Law II	993AISOAL2V19	VL	1,5		
Artificial Intelligence in Society	993AISOAISK19	KV	1,5		
Robopsychology	993AISORPSK19	KV	3		
Communicating AI	993AISOCAIK19	KV	1,5		
10,5					

Elective Tracks

One of the following elective tracks must be completed

AI and Mechatronics - Robotics and Autonomous Systems [20-1]

Course	Code	Type	ECTS	Date	Grade
Control Systems	993TAMRCOSU19	UE	1,5		
	993TAMRCOSV19	VL	3		
Introduction to Robotic Systems	993TAMRIRSU19	UE	1,5		
	993TAMRIRSV19	VL	3		
Production Automation Systems	993TAMRPASV19	VL	3		
Introduction to autonomous vehicles	481VRTRIAVK22	KV	6		
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AI and Mechatronics - Embedded Intelligence and Signal Processing [20-2]

Course	Code	Type	ECTS	Date	Grade
Pervasive Computing: Design and Development	921PECOPDDU13	UE	1,5		
	921PECOPDDV13	VL	3		
Pervasive Computing: Systems and Environments	921PECOPSEU13	UE	1,5		
	921PECOPSEV13	VL	3		
Optimum and Adaptive Signal Processing Systems	489MAITOASU22	UE	1,5		
	489MAITOASV22	VL	3		
Radar System Engineering	489WSHFRSEU22	UE	1,5		
	489WSHFRSEV22	VL	3		
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Symbolic AI and Mathematical Foundations [20-3]

Course	Code	Type	ECTS	Date	Grade
Sub-category Symbolic AI (at least 13,5 ECTS have to be completed)					
Knowledge Representation and Learning (must be completed if the focus is the sub-category Symbolic AI)	993TASMKPLU22	UE	1,5		
	993TASMKPLV22	VL	3		

Planning and Reasoning in Artificial Intelligence (must be completed if the focus is the sub-category Symbolic AI)	993TASMPRAU22	UE	1,5		
	993TASMPRAV22	VL	3		
Automated Reasoning	201LOSDAURU13	UE	1,5		
	404SLOCAURV23	VL	4,5		
Manyvalued Logic	201WIMSMVLU20	UE	1,5		
	201WIMSMVLV23	VL	3		
Berechenbarkeit und Komplexität	INBIPUEBEKO	UE	1,5		
	INBIPVOBEKO	VL	3		
Computer Algebra for Concrete Mathematics	921CGELCACU20	UE	1,5		
	921PECOCACV20	VL	3		
Model Checking	921COENMCHU21	UE	1,5		
	921COENMCHV21	VL	3		
Sub-category Mathematical Foundations (at least 13,5 ECTS have to be completed)					
Inverse Problems	201MMTKINPU23	UE	1,5		
	403MAMOINPV22	VL	3		
Wahrscheinlichkeitstheorie und stochastische Prozesse	289MANGWSPK20	KV	3		
Mathematik 3	281MANAMA3U20	UE	1,5		
	281MANAMA3V20	VL	4,5		
Numerik und Optimierung	481MAPHNUOK22	KV	6		
Discrete Mathematics	201ADMADEMU23	UE	1,5		
	404ALBRDEM23	VL	3		
Klassische Harmonische Analysis	TM1WAUEHARM	UE	1,5		
	TM1WAVOHARM	VL	3		
Markov Chains	201WTMSMACU22	UE	1,5		
	201WTMSMACV22	VL	3		
Mathematische Modelle in der Technik	201MAMOMMTV18	VL	3		
Numerik Partieller Differentialgleichungen	201UPDGNPDU18	UE	3		
	TM1PDVONPDG	VL	6		
Spezialvorlesung Funktionalanalysis (1,5 ECTS)	201FUANSP1V12	VL	1,5		
Spezialvorlesung Funktionalanalysis	201FUANSP2V12	VL	3		
Special Topics Numerical Analysis	201NUMASP2V22	VL	3		
Special Topics Probability Theory and Mathematical Statistics (1,5 ECTS)	201WTMSSP1V22	VL	1,5		
Special Topics Probability Theory and Mathematical Statistics	201WTMSSP2V22	VL	3		
Stochastic Simulation	201WTMSSTSU22	UE	1,5		

Stochastic Simulation	201WTMSSTSV22	VL	3		
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AI and Life Sciences [20-4]

Course	Code	Type	ECTS	Date	Grade
Genome Analysis & Transcriptomics	993TALSGATK19	KV	3		
Structural Bioinformatics	993TALSSTBK19	KV	3		
Artificial Intelligence in Life Sciences	993TALSSTBK19	UE	1,5		
	993TALSALSV20	VL	1,5		
Sequence Analysis and Phylogenetics	663INFOSAPU22	UE	3		
	663INFOSAPV22	VL	3		
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Area of Specialization [25]

Courses amounting to 9 / 9 / 6 or 12 ECTS must be completed so that the chosen **Elective Track** and the subject **Area of Specialization** total **27 ECTS**.

Course	Code	Type	ECTS	Date	Grade
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Master's Thesis Seminar [30]

Course	Code	Type	ECTS	Date	Grade
Master's Thesis Seminar	993MAARMTSS19	SE	3		
3					

