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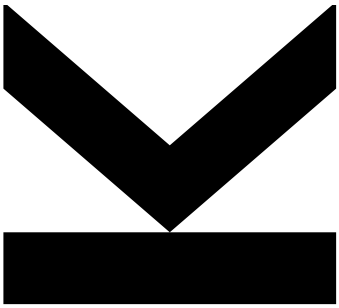
CURRICULUM FOR THE MASTER'S PROGRAM IN **ARTIFICIAL INTELLIGENCE.**



(in English)

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Contents

§ 1 Qualification Profile

(1) Artificial Intelligence (AI) refers to the ability of machines to perform cognitive tasks commonly associated with human intelligence including perception, learning, reasoning, planning, speech and language, and taking actions. Conceived more than five decades ago with the vision of understanding and emulating human intelligence, AI has since evolved towards a broadly applicable engineering discipline in which algorithms and data are brought together in order to solve a variety of problems in pattern recognition, learning, and decision making. Currently, AI pervades commercial applications in an unprecedented manner and is fundamentally changing how businesses operate across virtually all sectors, including manufacturing, healthcare, education, information technology, finance, and transportation. Concerning the impact of AI on industry and economy, experts frequently state that “data is the new oil, while AI is the new electricity”.

(2) The recent surge of AI can mainly be attributed to advances in machine learning, in particular deep learning, where algorithms learn from examples and experience rather than relying on predefined rules. Artificial deep neural networks trained by modern learning algorithms on massive datasets can achieve outstanding and sometimes super-human performance in various fields such as computer vision, speech recognition, and medical applications. Modern developments in AI have created the current vision of a general artificial intelligence, a machine that could successfully perform any cognitive task by virtue of its sensory perception, previous experience, learned skills, and world knowledge. Such a general AI would affect every application area since it could be deployed as an intelligent and highly skilled raw model for learning or deducing specialized solutions for any problem.

(3) AI is, by its nature, an interdisciplinary subject drawing upon computer science, mathematics, robotics, psychology, linguistics, philosophy, and many other fields. The Master program in Artificial Intelligence at Johannes Kepler University (JKU) Linz offers a thorough and methodical education in modern developments in the field of AI, in particular in deep learning. In addition, the students will acquire practical training, learn about the connections of AI to the legal system as well as its sociological implications, and acquire in-depth knowledge in their chosen elective track, where they will be capable of solving complex problems using scientific methods.

(4) Students of the Master program choose one out of four possible elective tracks. These are “AI and Mechatronics – Robotics and Autonomous Systems”, “AI and Mechatronics – Embedded Intelligence and Signal Processing”, “Symbolic AI and Mathematical Foundations”, and “AI and Life Sciences”.

1. “AI and Mechatronics – Robotics and Autonomous Systems”: In this elective track, students learn to apply AI techniques to robotics and autonomous systems. Robotics deals with the construction and operation of robots as well as computer systems for their control, sensory feedback, and information processing. Autonomous systems include self-driving cars, autonomous drones, and production systems that work independent of human control. Robots and other autonomous machines are steered by control techniques such as adaptive optimal control known as reinforcement learning in the field of AI. AI methods concerning the perception and model-building of the environment, planning, and self-localization are crucial for robotics and autonomous systems. These techniques can be complemented by learning a model from data in contrast to classical techniques in mechatronics.
2. “AI and Mechatronics – Embedded Intelligence and Signal Processing”: In this elective track, students learn skills and tools to embed AI into sensors and devices in order to make machines, production lines, and even factories more intelligent. AI techniques analyzing the data from these sensors and devices can optimize maintenance, logistics, scheduling, marketing, and many other processes. An important aspect is signal processing which analyzes the data coming from sensors and embedded devices that monitor the environment, such as cameras, radar, lidar, ultra sound, and chemical detectors.

3. “Symbolic AI and Mathematical Foundations”: Classical methods in AI rely on symbolic reasoning based on logic and mathematics. On the one hand, a focus of this elective track is on deductive reasoning, including model checking and theorem proving, techniques which are also essential for software and hardware verification. On the other hand, students can focus on specialized mathematical topics in the fields of analysis, numerics, and statistics, which underpin modern AI technologies.
4. “AI and Life Sciences”: In this elective track, the students learn to apply AI techniques in medicine, biology, biotechnology, genomics, genetics, and other life science fields. In structural bioinformatics, AI methods like deep neural networks predict the structure and function of proteins. In drug design, AI techniques identify side effects of drug candidates. In medicine and health care, AI methods allow analyzing medical images, predicting the prevalence of diseases in certain regions, optimizing processes in hospitals, improving diagnosis, supporting treatment, and monitoring patients.

(5) All four elective tracks make use of existing academic excellence and infrastructure at JKU. The two elective tracks in mechatronics are tailored to the strong local industrial environment in manufacturing systems engineering, plant construction, and general engineering. Students will acquire skills to embed AI technologies into robots, autonomous systems, machinery, and equipment and to extract and analyze data from such devices.

(6) This Master program prepares its graduates both for subsequent PhD studies and for the immediate entry into the job market, where graduates will be able to develop AI solutions in many different sectors of industry and economy.

§ 2 Admissions

(1) In accordance with § 54 para. 1 UG the Master’s program in Artificial Intelligence belongs to the category of engineering degrees and is taught in English.

(2) The Master’s program in Artificial Intelligence is based on the Bachelor’s program in Artificial Intelligence at JKU. Graduates of this Bachelor’s program are admitted to the Master’s program without any restrictions.

(3) Graduates of Artificial Intelligence or related programs at recognized national or international post-secondary educational institutions of at least the same higher education level can be admitted to the Master’s program in Artificial Intelligence if their degree programs are close to the Bachelor’s program in Artificial Intelligence at JKU. Differences between programs can be compensated by replacing one or more courses from the subject Area of Specialization with courses specified in the notification of admission.

(4) In addition, graduates of the JKU Bachelor‘s programs in "Informatik", "Technische Mathematik", "Technische Physik", "Mechatronik", "Elektronik und Informationstechnik", "NaWi-Tec", "Statistik", "Wirtschaftsinformatik", "Medical Engineering" and "Bioinformatics" are admitted to the Masters’s program in Artificial Intelligence if they have completed the following courses at JKU or courses with comparable learning outcomes: "Machine Learning: Supervised Techniques" (536MLPEMSTV19, VL, 3 ECTS) and "Machine Learning: Unsupervised Techniques" (536MLPEMUTV19, VL, 3 ECTS). If graduates of these studies have not completed these courses or courses with comparable learning outcomes, they are nonetheless admitted to enroll to the Master’s program but, as a condition, have to complete these courses by the end of the second semester within the Master’s program. The corresponding acquired ECTS points can be used for the subject Area of Specialization or the Free Electives.

(5) Graduates of Bachelor's programs or other programs at recognized national or international post-secondary educational institutions of at least the same higher education level can be admitted to the Master's program in Artificial Intelligence if their degree programs are close to one of the Bachelor's programs at JKU listed in para. 4 under the same admission condition as in para. 4. Differences between programs can be compensated by replacing one or more courses from the subject Area of Specialization with courses specified in the notification of admission.

(6) Graduates of programs at recognized national or international post-secondary educational institutions of at least the same higher education level that are not close enough according to para. 3 or 5 can be granted admission on the condition to complete supplementary examinations with up to 40 ECTS points to be taken by the end of the second semester of their Master's study.

§ 3 Structure and Outline

(1) The Master's program in Artificial Intelligence covers 4 semesters and consists of 120 ECTS points, which are distributed among the following subjects:

Subjects	**ECTS**
Mandatory Subjects	64.5/64.5/61.5/67.5
Elective Tracks	18/18/21/15
Master's Thesis (incl. Master's Thesis Seminar)	24
Master's Examination	1.5
Free Electives	12
Total	120

(2) For Free Electives students have to pass examinations corresponding to 12 ECTS points, which can be chosen from any recognized national or international post-secondary educational institution. The Free Electives shall provide additional skills beyond Artificial Intelligence and can be taken anytime during the Master's study.

(3) This program is, with certain restrictions, suitable for students with professional duties or supervision obligations. Most lectures and combined courses are also offered in digital form (streaming). In general, there is no obligation to attend lectures, although attendance is recommended. In combined courses, exercises, seminars, and practical works, attendance is sometimes mandatory. For exams, it cannot be guaranteed that they will be offered in digital form or at the end of the day. Working students must expect an extended period of study.

(4) Courses are usually offered only once per year.

(5) The four recommended courses of studies are shown in the annex.

§ 4 Mandatory Subjects/Modules

The following subjects have to be completed successfully:

Code	**Name**	**ECTS**
993MLPE19	Machine Learning and Perception	34.5
993SEPT19	Seminar and Practical Training	10.5
993AISO19	AI and Society	10.5

continue next page

Code	Name	ECTS
993ARSP23	Area of Specialization	9/9/6/12

§ 5 Elective Subjects/Modules

(1) Students have to choose one out of these four elective tracks:

Code	Name	ECTS
993TAMR23	AI and Mechatronics – Robotics and Autonomous Systems	18
993TAME22	AI and Mechatronics – Embedded Intelligence and Signal Processing	18
993TASM22	Symbolic AI and Mathematical Foundations	21
993TALS23	AI and Life Sciences	15

(2) If the elective track “Symbolic AI and Mathematical Foundations” is chosen, a “focus” sub-category has to be chosen from which at least 13.5 ECTS points have to be completed. The two possible sub-categories are listed below. As part of the focus “Symbolic AI”, courses specified in the study handbook are required to be taken.

Code	Name	ECTS
993TASA22	Symbolic AI	min. 13.5
993TAMF22	Mathematical Foundations	min. 13.5

§ 6 Courses

(1) The names and the types of all courses of the mandatory subjects and the elective tracks as well as their ECTS points, their duration in hours per week, their codes, their registration requirements, and their admission procedures (in case of limited availability of places) are described in the study handbook of JKU (studienhandbuch.jku.at).

(2) The possible types of courses as well as the examination regulations are described in §§ 13 and 14 of the JKU statute (Section "Studienrecht").

(3) Courses of mandatory subjects and of the elective tracks that have already been used for the admission-granting Bachelor degree are to be substituted by courses from the subject Area of Specialization with at least the same amount of ECTS points, whereat courses of the elective track "AI and Life Sciences" must be replaced by courses from the area "Life Sciences" of the subject Area of Specialization. Each such substituting course from the subject Area of Specialization then belongs to the mandatory subject or elective track of the replaced course.

§ 7 Master's Thesis

(1) Students of the Master's program in Artificial Intelligence must write a Master's thesis according to § 81 UG and § 36 of the JKU statute (Section "Studienrecht").

(2) The Master's thesis is a written scientific document corresponding to an effort of 21 ECTS points.

(3) The Master's thesis serves as a proof that graduates are able to perform scientific work autonomously and systematically. The topic of the thesis must be taken from the mandatory subjects or elective tracks and must permit completion within 6 months.

(4) The Curricular Committee for Artificial Intelligence may specify guidelines for the formal structure of a Master's thesis.

(5) In addition to the Master's thesis, students must pass the "Master's Thesis Seminar in AI" with 3 ECTS points.

§ 8 Examination Regulations

(1) The regulations for subject examinations and course examinations are described in the study handbook of JKU.

(2) The Master's program in Artificial Intelligence is concluded by a Master's examination.

(3) The Master's examination consists of two parts: The first part is the successful completion of the mandatory subjects and the elective track according to §§ 4 and 5.

(4) The second part of the Master's examination is a comprehensive oral exam (worth 1.5 ECTS points) conducted by an examination committee. Prior to being admitted to the Master's examination, students must complete the first part of the Master's examination, the Master's thesis, the Master's thesis seminar in AI, and the free electives.

(5) The second part of the Master's examination starts with a presentation and defense of the Master's thesis, followed by an oral exam that covers content of the mandatory subjects and the chosen elective track. If courses are replaced by compensation courses as a result of the admission process (§ 2), the examination topics include the contents of the compensation courses.

(6) The examination committee consists of three members and is formed by the Vice Rector of Academic Affairs. The candidate may submit a proposal for the committee members. In general, the advisor of the Master's thesis is a member of the examination committee. The head of the committee suggests the assessment of the presentation and the defense of the thesis. The other two examiners suggest the assessment of the examinations in the mandatory subjects and the elective track, respectively.

§ 9 Academic Degree

(1) Graduates of the Master's program in Artificial Intelligence are awarded the academic degree "Master of Science", abbreviated "MSc" or "MSc (JKU)".

(2) The certificate about the academic degree is issued in English and in German.

§ 10 Legal Validity

(1) This curriculum comes into effect on October 1st, 2019.

(2) § 2 para. 6, § 11, annex 1, annex 2, annex 3 and annex 4 as published in the official newsletter of the Johannes Kepler University Linz on June 30th, 2020, 30th piece, item 351 will take effect on October 1st, 2020.

(3) § 3 para. 1, 3, 4 and 5, §§ 4, 5 and 11 and annex 1, 2, 3 and 4 as published in the official newsletter of the Johannes Kepler University Linz on May 18th, 2021, 23rd piece, item 295 will take effect on October 1st, 2021.

(4) § 1 para. 4, § 2 para. 3 to 6, § 3 para. 1, § 4, § 5 and § 11 para. 3 and annex 1, 2, 3 and 4 as published in the official newsletter of the Johannes Kepler University Linz on June 9th, 2022, 30th piece, item 455 will take effect on October 1st, 2022.

(5) § 3 para. 1, § 4, § 5 para. 1, § 6 para. 3, § 11 para. 3 and 4 and annex 1 and 4 as published in the official newsletter of the Johannes Kepler University Linz on May 23rd, 2023, 23rd piece, item 409 will take effect on October 1st, 2023.

§ 11 Transitional Provisions

(1) For students who have passed examinations within the curriculum of the Master's program in Artificial Intelligence in a previous version, the equivalences listed in the study handbook of JKU apply.

(2) In addition to the equivalences given in the study handbook of JKU, following equivalences are effective:

Table A: Equivalence of subject packages

Package of subjects in the Master's program in Artificial Intelligence version of 2019	**equivalent package of subjects in the Master's program in Artificial Intelligence version of 2021**
993TALS19: AI and Life Sciences (15 ECTS) + 993ARSP19: Area of Specialization (12 ECTS)	93TALS21: AI and Life Sciences (9 ECTS) + 993ARSP21: Area of Specialization (18 ECTS)

(3) In addition to the equivalences given in the study handbook of JKU, following equivalences are effective:

Table B: Equivalence of subject packages

Package of subjects in the Master's program in Artificial Intelligence version of 2021	**equivalent package of subjects in the Master's program in Artificial Intelligence version of 2022**
993TALS21: AI and Life Sciences (9 ECTS) + 993ARSP21: Area of Specialization (18 ECTS)	993TALS22: AI and Life Sciences (12 ECTS) + 993ARSP22: Area of Specialization (15 ECTS)
993TARK19: Reasoning and Knowledge Representation (18 ECTS) + 993ARSP21: Area of Specialization (9 ECTS)	993TASM22: Symbolic AI and Mathematical Foundations (21 ECTS) + 993ARSP22: Area of Specialization (6 ECTS)

(4) In addition to the equivalences given in the study handbook of JKU, following equivalences are effective:

Table C: Equivalence of subject packages

Package of subjects in the Master's program in Artificial Intelligence version of 2022	**equivalent package of subjects in the Master's program in Artificial Intelligence version of 2023**
993TAMR19: AI and Mechatronics – Robotics and Autonomous Systems (16.5 ECTS) + 993ARSP22: Area of Specialization (10.5 ECTS)	993TAMR23: AI and Mechatronics – Robotics and Autonomous Systems (18 ECTS) + 993ARSP23: Area of Specialization (9 ECTS)
993TALS22: AI and Life Sciences (12 ECTS) + 993ARSP22: Area of Specialization (15 ECTS)	993TALS23: AI and Life Sciences (15 ECTS) + 993ARSP23: Area of Specialization (12 ECTS)

Annex 1: Global map of study subjects – Master's Program "Artificial Intelligence" (2023)

Elective Track: AI and Mechatronics – Robotics and Autonomous Systems

1st Semester (WS)		2nd Semester (SS)		3rd Semester (WS)		4th Semester (SS)		
Subject/Course	**ECTS**	**Subject/Course**	**ECTS**	**Subject/Course**	**ECTS**	**Subject/Course**	**ECTS**	
Machine Learning and Perception Computer Vision (3 VL) Computer Vision (1.5 UE) Deep Learning and Neural Nets I (3 VL) Deep Learning and Neural Nets I (1.5 UE) LSTM and Recurrent Neural Nets (3 VL) LSTM and Recurrent Neural Nets (1.5 UE)	13,5	**Machine Learning and Perception** Deep Learning and Neural Nets II (3 VL) Deep Learning and Neural Nets II (1.5 UE) Deep Reinforcement Learning (3 VL) Deep Reinforcement Learning (1.5 UE) Theoretical Concepts of Machine Learning (3 VL) Theoretical Concepts of Machine Learning (1.5 UE)	13,5	**Machine Learning and Perception** Explainable AI (1.5 VL) Explainable AI (1.5 UE) Probabilistic Models (3 VL) Probabilistic Models (1.5 UE)	7,5			**34,5**
AI and Society AI and Law I (3 VL) Artificial Intelligence in Society (1.5 KV)	4,5	**AI and Society** AI and Law II (1.5 VL) Robopsychology (3 KV)	4,5	**AI and Society** Communicating AI (1.5 KV)	1,5			**10,5**
				Seminar and Practical Training Seminar in AI (Master) (3 SE) Practical Work in AI (Master) (7.5 PR)	10,5			**10,5**
Elective Track: AI and Mechatronics – Robotics and Autonomous Systems Control Systems (3 VL) Control Systems (1.5 UE) Production Automation Systems (3 VL)	7,5	**Elective Track: AI and Mechatronics – Robotics and Autonomous Systems** Introduction to Robotic Systems (3 VL) Introduction to Robotic Systems (1.5 UE) Introduction to autonomous vehicles (6 KV)	10,5					**18,0**
Area of Specialization	1,5			**Area of Specialization**	7,5			**9,0**
Free Electives	3,0	**Free Electives**	1,5	**Free Electives**	3,0	**Free Electives**	4,5	**12,0**
						Master's Thesis Seminar	3,0	**3,0**
						Master's Examination	1,5	**1,5**
						Master's Thesis	21,0	**21,0**
	30,0		**30,0**		**30,0**		**30,0**	

Total ECTS: 120,0

Annex 2: Global map of study subjects – Master's Program "Artificial Intelligence" (2022)

Elective Track: AI and Mechatronics – Embedded Intelligence and Signal Processing

1st Semester (WS)		2nd Semester (SS)		3rd Semester (WS)		4th Semester (SS)		
Subject/Course	**ECTS**	**Subject/Course**	**ECTS**	**Subject/Course**	**ECTS**	**Subject/Course**	**ECTS**	
Machine Learning and Perception Computer Vision (3 VL) Computer Vision (1.5 UE) Deep Learning and Neural Nets I (3 VL) Deep Learning and Neural Nets I (1.5 UE) LSTM and Recurrent Neural Nets (3 VL) LSTM and Recurrent Neural Nets (1.5 UE)	13,5	**Machine Learning and Perception** Deep Learning and Neural Nets II (3 VL) Deep Learning and Neural Nets II (1.5 UE) Deep Reinforcement Learning (3 VL) Deep Reinforcement Learning (1.5 UE) Theoretical Concepts of Machine Learning (3 VL) Theoretical Concepts of Machine Learning (1.5 UE)	13,5	**Machine Learning and Perception** Explainable AI (1.5 VL) Explainable AI (1.5 UE) Probabilistic Models (3 VL) Probabilistic Models (1.5 UE)	7,5			**34,5**
AI and Society AI and Law I (3 VL) Artificial Intelligence in Society (1.5 KV)	4,5	**AI and Society** AI and Law II (1.5 VL) Robopsychology (3 KV)	4,5	**AI and Society** Communicating AI (1.5 KV)	1,5			**10,5**
				Seminar and Practical Training Seminar in AI (Master) (3 SE) Practical Work in AI (Master) (7.5 PR)	10,5			**10,5**
Elective Track: AI and Mechatronics – Embedded Intelligence and Signal Processing Optimum and Adaptive Signal Processing Systems (3 VL) Optimum and Adaptive Signal Processing Systems (1.5 UE) Radar System Engineering (3 VL) Radar System Engineering (1.5 UE)	9,0			**Elective Track: AI and Mechatronics – Embedded Intelligence and Signal Processing** Pervasive Computing: Design and Development (3 VL) Pervasive Computing: Design and Development (1.5 UE) Pervasive Computing: Systems and Environments (3 VL) Pervasive Computing: Systems and Environments (1.5 UE)	9,0			**18,0**
Area of Specialization	1,5	**Area of Specialization**	7,5					**9,0**
Free Electives	1,5	**Free Electives**	4,5	**Free Electives**	1,5	**Free Electives**	4,5	**12,0**
						Master's Thesis Seminar	3,0	**3,0**
						Master's Examination	1,5	**1,5**
						Master's Thesis	21,0	**21,0**
	30,0		**30,0**		**30,0**		**30,0**	

Total ECTS: 120,0

Annex 3: Global map of study subjects – Master's Program "Artificial Intelligence" (2022)

Elective Track: Symbolic AI and Mathematical Foundations

1st Semester (WS)		2nd Semester (SS)		3rd Semester (WS)		4th Semester (SS)		
Subject/Course	**ECTS**	**Subject/Course**	**ECTS**	**Subject/Course**	**ECTS**	**Subject/Course**	**ECTS**	
Machine Learning and Perception Computer Vision (3 VL) Computer Vision (1.5 UE) Deep Learning and Neural Nets I (3 VL) Deep Learning and Neural Nets I (1.5 UE) LSTM and Recurrent Neural Nets (3 VL) LSTM and Recurrent Neural Nets (1.5 UE)	13,5	**Machine Learning and Perception** Deep Learning and Neural Nets II (3 VL) Deep Learning and Neural Nets II (1.5 UE) Deep Reinforcement Learning (3 VL) Deep Reinforcement Learning (1.5 UE) Theoretical Concepts of Machine Learning (3 VL) Theoretical Concepts of Machine Learning (1.5 UE)	13,5	**Machine Learning and Perception** Explainable AI (1.5 VL) Explainable AI (1.5 UE) Probabilistic Models (3 VL) Probabilistic Models (1.5 UE)	7,5			**34,5**
AI and Society AI and Law I (3 VL) Artificial Intelligence in Society (1.5 KV)	4,5	**AI and Society** AI and Law II (1.5 VL) Robopsychology (3 KV)	4,5	**AI and Society** Communicating AI (1.5 KV)	1,5			**10,5**
				Seminar and Practical Training Seminar in AI (Master) (3 SE) Practical Work in AI (Master) (7.5 PR)	10,5			**10,5**
Elective Track: Symbolic AI and Mathematical Foundations *See Curriculum and Study Handbook*	7,5	**Elective Track: Symbolic AI and Mathematical Foundations** *See Curriculum and Study Handbook*	7,5	**Elective Track: Symbolic AI and Mathematical Foundations** *See Curriculum and Study Handbook*	6,0			**21,0**
Area of Specialization	3,0	**Area of Specialization**	1,5	**Area of Specialization**	1,5			**6,0**
Free Electives	1,5	**Free Electives**	3,0	**Free Electives**	3,0	**Free Electives**	4,5	**12,0**
						Master's Thesis Seminar	3,0	**3,0**
						Master's Examination	1,5	**1,5**
						Master's Thesis	21,0	**21,0**
	30,0		**30,0**		**30,0**		**30,0**	

Total ECTS: 120,0

Annex 4: Global map of study subjects – Master's Program "Artificial Intelligence" (2023)

Elective Track: AI and Life Sciences

1st Semester (WS)		2nd Semester (SS)		3rd Semester (WS)		4th Semester (SS)		
Subject/Course	**ECTS**	**Subject/Course**	**ECTS**	**Subject/Course**	**ECTS**	**Subject/Course**	**ECTS**	
Machine Learning and Perception Computer Vision (3 VL) Computer Vision (1.5 UE) Deep Learning and Neural Nets I (3 VL) Deep Learning and Neural Nets I (1.5 UE) LSTM and Recurrent Neural Nets (3 VL) LSTM and Recurrent Neural Nets (1.5 UE)	13,5	**Machine Learning and Perception** Deep Learning and Neural Nets II (3 VL) Deep Learning and Neural Nets II (1.5 UE) Deep Reinforcement Learning (3 VL) Deep Reinforcement Learning (1.5 UE) Theoretical Concepts of Machine Learning (3 VL) Theoretical Concepts of Machine Learning (1.5 UE)	13,5	**Machine Learning and Perception** Explainable AI (1.5 VL) Explainable AI (1.5 UE) Probabilistic Models (3 VL) Probabilistic Models (1.5 UE)	7,5			**34,5**
AI and Society AI and Law I (3 VL) Artificial Intelligence in Society (1.5 KV)	4,5	**AI and Society** AI and Law II (1.5 VL) Robopsychology (3 KV)	4,5	**AI and Society** Communicating AI (1.5 KV)	1,5			**10,5**
				Seminar and Practical Training Seminar in AI (Master) (3 SE) Practical Work in AI (Master) (7.5 PR)	10,5			**10,5**
Elective Track: AI and Life Sciences Sequence Analysis and Phylogenetics (3 VL) Sequence Analysis and Phylogenetics (3 UE)	6,0	**Elective Track: AI and Life Sciences** Artificial Intelligence in Life Sciences (1.5 VL) Artificial Intelligence in Life Sciences (1.5 UE) Genome Analysis & Transcriptomics (3 KV) Structural Bioinformatics (3 KV)	9,0					**15,0**
Area of Specialization	3,0	**Area of Specialization**	1,5	**Area of Specialization**	7,5			**12,0**
Free Electives	3,0	**Free Electives**	1,5	**Free Electives**	3,0	**Free Electives**	4,5	**12,0**
						Master's Thesis Seminar	3,0	**3,0**
						Master's Examination	1,5	**1,5**
						Master's Thesis	21,0	**21,0**
	30,0		**30,0**		**30,0**		**30,0**	

Total ECTS: 120,0