

Program of Studies:	Master Program Bioinformatics
Name of the module:	Artificial Intelligence
Abbreviation:	I-M-5
Subtitle:	Core Lecture
Modules:	Lecture: 4 h (weekly) Tutorial: 2 h (weekly)
Semester:	1 st -3 rd semester/at least every two years
Responsible lecturer:	Prof. Dr. Jörg Hoffmann
Lecturer:	Prof. Dr. Jörg Hoffmann, Prof. Dr. Jana Köhler
Language:	English
Level of the unit/ Mandatory or not:	Graduate course / mandatory elective
Total workload:	270 h = 90 h of classes and 180 h private study
Credits:	9
Entrance requirements:	For graduate students: none
Aims/Competences to be developed:	Knowledge about basic methods in Artificial Intelligence
Content:	<ul style="list-style-type: none"> - Problem-solving: - Uninformed- and informed search procedures - Adversarial search - Knowledge and reasoning: - Propositional logic - SAT - First-order logic, Inference in first-order logic - Knowledge representation, Semantic Web - Default logic, rule-based mechanisms - Planning: - STRIPS formalism and complexity - Delete relaxation heuristics - Probabilistic reasoning: - Basic probabilistic methods - Bayesian networks
Assessment/Exams:	<ul style="list-style-type: none"> - Regular attendance of classes and tutorials - Solving of weekly assignments - Passing the final written exam - A re-exam takes place during the last two weeks before the start of lectures in the following semester.
Grade:	Will be determined from the performance in exams. The exact modalities will be announced at the beginning of the module.
Literature:	Russel & Norvig Artificial Intelligence: A Modern Approach; further reading will be announced before the start of the course on the course page on the Internet.