

Module MA-INF 4209	Seminar Principles of Data Mining and Learning Algorithms					
Workload 120 h	Credit points 4 CP	Duration 1 semester	Frequency every year			
Module coordinator	Prof. Dr. Stefan Wrobel					
Lecturer(s)	Prof. Dr. Stefan Wrobel					
Classification	Programme M. Sc. Computer Science		Mode Optional	Semester 2. or 3.		
Technical skills	Enhanced and in-depth knowledge in specialized topics in the area of machine learning and data mining, acquiring the competence to independently study scientific literature, present it to others and discuss it with a knowledgeable scientific auditorium. Learn how to scientifically present prior work by others, in writing and in presentations.					
Soft skills	Communicative skills (preparing and presenting talks, written presentation of contents in a longer document), self competences (time management with long-ranging deadlines, ability to accept and formulate criticism, ability to analyse, creativity).					
Contents	Theoretical, statistical and algorithmical principles of data mining and learning algorithms. Search and optimization algorithms. Specialized learning algorithms from the frontier of research. Fundamental results from neighbouring areas.					
Prerequisites	Recommended: At least 1 of the following: MA-INF 4111 – Intelligent Learning and Analysis Systems: Machine Learning MA-INF 4112 – Intelligent Learning and Analysis Systems: Data Mining and Knowledge Discovery					
Format	Teaching format		Group size	h/week	Workload[h]	CP
	Seminar		10	2	30 T / 90 S	4
	T = face-to-face teaching; S = independent study					
Exam achievements	Oral presentation, written report (graded)					
Study achievements	none (not graded)					
Forms of media	Scientific papers and websites, interactive presentations.					
Literature	The relevant literature will be announced towards the end of the previous semester.					