Module MA-INF 4217	**Seminar Machine Learning Methods in Systems Biology**				
Workload 120 h	**Credit points** 4 CP	**Duration** 1 semester	**Frequency** every year		
Module coordinator	Dr. Holger Fröhlich				
Lecturer(s)	Dr. Holger Fröhlich				
Classification	**Programme** M. Sc. Computer Science	**Mode** Optional	**Semester** 2.		
Technical skills	- understanding and knowledge of current concepts in systems biology - understanding and knowledge of involved computational methods, specifically from the field of Machine Learning				
Soft skills	- communication: oral scientific presentation of a defined topic - self-competences: ability to read, understand and analyze scientific publications - social skills: ability to discuss a scientific topic with other students and the staff				
Contents	Conference and journal papers covering the areas: - Introduction to Systems Biology - Overview about different modeling concepts and philosophies - Machine Learning based approaches: Gaussian Graphical Models, Dynamic Bayesian Networks, methods for heterogenous data integration				
Prerequisites	**Recommended:** MA-INF 4216 – Data Mining and Machine Learning Methods in Bioinformatics				
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	powerpoint				
Literature	selected journal and conference papers				