Module MA-INF 3213	**Advanced Topics in Information Systems**		
Workload 180 h	**Credit points** 6 CP	**Duration** 1 semester	**Frequency** every year
Module coordinator	Jun.-Prof. Dr. Alexander Markowetz		
Lecturer(s)	Jun.-Prof. Dr. Alexander Markowetz		
Classification	**Programme** M. Sc. Computer Science	**Mode** Optional	**Semester** 1., 2. or 3.
Technical skills	An in-depth understanding of the topic under investigation. A command of the concepts and terminologies, in order to discuss and compare the various systems, algorithms and approaches. The ability to implement the presented systems and algorithms. The ability to dissect (i) the logic of arguments and (ii) experimental setups deployed by publications in this area.		
Soft skills	• Oral discussion and presentation in classes and tutorials. • Written presentation of exercise solutions. • Team collaboration in solving theoretical and practical problems. • Critical assessment of literature, systems, algorithms and approaches.		
Contents	In depth coverage of a selected topic in Information Systems, in particular focusing on recent system implementations and novel algorithms. Example subjects may consist of: Web Information Systems, Information Retrieval, Management of Spatial Data, Management of Stream Data, or Data Warehousing.		
Prerequisites	**Required:** A thorough understanding of Database Management Systems, such as laid out in the text book by Ramakrishnan and Gehrke. Solid skills in developing OO software. In depth knowledge of Algorithms, such as summarized by the introductory book of Cormen et al.		

Format

Teaching format	**Group size**	**h/week**	**Workload[h]**	**CP**
Lecture	60	2	30 T / 45 S	2.5
Exercises	30	2	30 T / 75 S	3.5

T = face-to-face teaching; S = independent study

Exam achievements	Written exam	(graded)
Study achievements	Successful exercise participation	(not graded)
Forms of media		
Literature	Recent scientific publications, and selected chapters of advanced textbooks.	