Module MA-INF 3207	**Advanced Logic Programming**				
Workload 180 h	**Credit points** 6 CP	**Duration** 1 semester	**Frequency** every year		
Module coordinator	Dr. Günter Kniesel				
Lecturer(s)	Dr. Günter Kniesel, Jun.-Prof. Dr. Janis Voigtländer				
Classification	**Programme** M. Sc. Computer Science	**Mode** Optional	**Semester** 2. or 3.		
Technical skills	Ability to master advanced logic programing techniques and to write clean but highly efficient Prolog programs using these techniques; competence in problem solving using the declarative paradigm; competence in using the non-logical features of Prolog;				
Soft skills	Skills in written and oral presentation of the solutions to programming assignments, collaboration with other students in small teams				
Contents	Quick refresh of logic programming basics and a Prolog development environment, searching, understanding backtracking and the cut, context arguments, difference lists, data structures, constraint programming, meta-programming, meta-interpreters, partial evaluation, partial evaluation of meta-interpreters, efficient Prolog programming, logic program analysis.				
Prerequisites	**Recommended:** Good knowledge of the foundations of Logic Programming				
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	Oral exam (graded)				
Study achievements	Successful exercise participation (not graded)				
Forms of media					
Literature	W. Clocksin, C. Mellish: Programming in Prolog, Springer. • L. Sterling, E. Shapiro (ed.): The Art of Prolog (2nd ed.) MIT Press. • Richard O'Keefe: The Craft of Prolog, MIT Press.				