Module MA-INF 1314	**Online Motion Planning**				
Workload 270 h	**Credit points** 9 CP	**Duration** 1 semester	**Frequency** every year		
Module coordinator	Prof. Dr. Rolf Klein				
Lecturer(s)	Prof. Dr. Rolf Klein, PD Dr. Elmar Langetepe				
Classification	**Programme** M. Sc. Computer Science	**Mode** Optional	**Semester** 1., 2., 3. or 4.		
Technical skills	To acquire fundamental knowledge on topics and methods in online motion planning;				
Soft skills					
Contents	Search and exploration in unknown environments (e.g., graphs, cellular environmwents, polygons, strets), online algorithms, competitive analysis, competitive complexity,functional optimization, shortest watchman route, tethered robots, marker algorithms, spiral search, approximation of optimal search paths.				
Prerequisites	**Recommended:** BA-INF 114 – Grundlagen der algorithmischen Geometrie				
Format	**Teaching format**	**Group size**	**h/week**	**Workload[h]**	**CP**
	Lecture	60	4	60 T / 105 S	5.5
	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	Java applets of geometry lab				
Literature	Scientific research articles will be recommended in the lecture.				