Module MA-INF 3222	**eSecurity**				
Workload 270 h	**Credit points** 9 CP	**Duration** 1 semester	**Frequency** every year		
Module coordinator	Prof. Dr. Joachim von zur Gathen				
Lecturer(s)	Prof. Dr. Joachim von zur Gathen, Dr. Michael Nüsken				
Classification	**Programme** M. Sc. Computer Science	**Mode** Optional	**Semester** 2.		
Technical skills	Understanding of security concerns and measures, and of the interplay between computing power and security requirements in the realm of real-world applications, in particular internet-based ones. Mastery of advanced techniques for the design of cryptosystems and practical cryptanalysis.				
Soft skills	Oral presentation (in tutorial groups), written presentation (of exercise solutions), team collaboration in solving homework problems, critical assessment.				
Contents	First focus: security on the internet and secure protocols. Furthermore: at least one real world application, for example • electronic health cards, • electronic elections, or • electronic passports.				
Prerequisites	**Required:** MA-INF 1103 – Cryptography				
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	Written exam (graded)				
Study achievements	Successful exercise participation (not graded)				
Forms of media					
Literature	Varying according to the selected topic				