

Module MA-INF 3236	IT Security					
Workload 180 h	Credit points 6 CP	Duration 1 semester	Frequency every year			
Module coordinator	Prof. Dr. Michael Meier					
Lecturer(s)	Prof. Dr. Michael Meier					
Classification	Programme M. Sc. Computer Science		Mode Optional	Semester 1. or 2.		
Technical skills	Students are introduced to selected active research fields of IT security and gain deep knowledge of the research literature. Students learn selected aspects of IT security. This includes risks and vulnerabilities of today's information technology as well as concepts to increase the level of IT security, their applications and their weaknesses.					
Soft skills	Theoretical exercises to support in-depth understanding of lecture topics and to stimulate discussions, practical exercises in teamwork to support time management, targeted organization of practical work and critical discussion of own and others' results.					
Contents	<ul style="list-style-type: none">• security threats• advanced network security: internet routing security, network attack detection, network information hiding• cryptographic key management• building automation security• advanced host security• security patterns• privacy and pseudonymization					
Prerequisites	Required: Fundamental knowledge in the following areas: operating systems, networks, security					
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						