Master of Science (M.Sc.) in Computer Sciences and Engineering

Course Group	total ECTS	Course Code	Course name	Course type	ECTS	Pre-requisite
Breadh 1 Theory and Algorithms		CS 502	Computational Complexity	elective	6	
		CS 521	Modern Cryptography	elective	6	
		CS 524	Analysis of Numerical Algorithms	elective	6	
		CS 526	Advanced Algorithms and Data Structures	elective	6	
Breadh 2 Architecture, Systems and Software		CS 504	Advanced Software Engineering	elective	6	
		CS 506	Advanced Operating Systems	elective	6	
		CS 508	Advanced Database Management Systems	elective	6	
		CS 509	Advanced Computer Architecture	elective	6	
		CS 510	Advanced Data Communications and Computer Networks	elective	6	
Breadh 3 Applications		CS 511	Advanced Artificial Intelligence	elective	6	
		CS 514	Advanced Computer Vision	elective	6	
		CS 515	Advanced Computer Graphics	elective	6	
		CS 516	User Interface Design, Implementation and Evaluation	elective	6	
		CS 517	Analysis and Design of Online Communities	elective	6	
		CS 519	Social Network Analysis	elective	6	
		CS 520	Advanced Internet Programming	elective	6	
		CS 530	High Dynamic Range Imaging (HDR)	elective	6	
		CS 525	Advanced Data Mining	elective	6	
		CS 590	Master Thesis	elective	24	
Total	60					

Graduate Studies: summary of conditions for successful completion of studies

Category	ECTS	Note:
Courses	36	Students are expected to: 1. Complete courses, that total 36 ECTS credits 2. Write and defend the completed master's thesis, which totals 24 ECTS credits. Students must successfully complete at least one course in two out of three different breadth areas defined in the table above. Students may select their coursework from the wider variety of courses offered at other related programs. Students may take a maximum of 12 ECTS credits (2 courses) from a pool of undergraduate courses (400 level and higher) from other related programs with the approval from the program coordinator (provided that the student did not take the same course in undergraduate level). Students are also allowed to apply 12 ECTS (2 courses) from other related Master (500 level) or PhD programs (600 level), with the approval from the program coordinator.
Master Thesis	24	
Total	60	