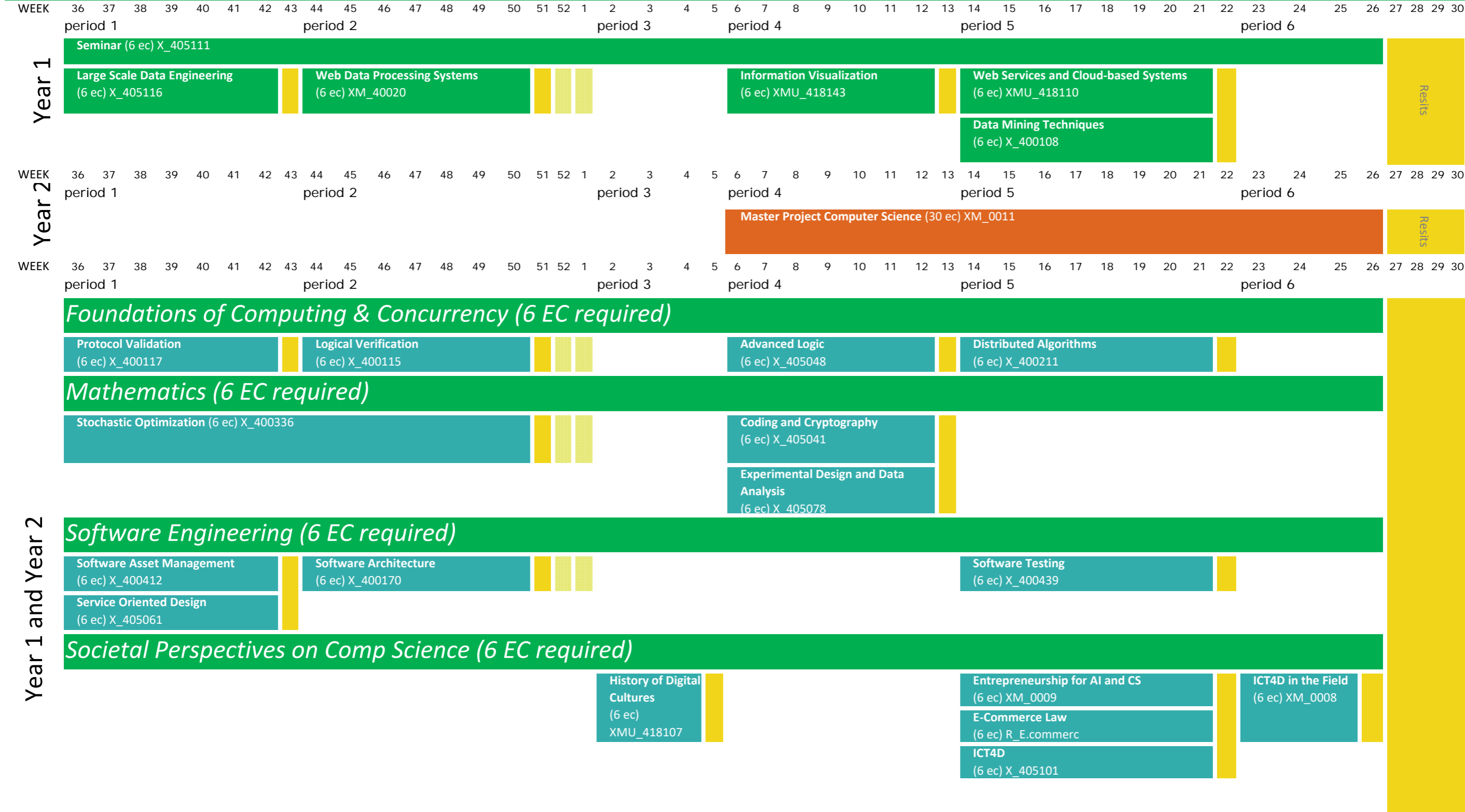


Year Schedule MSc Computer Science 2019 - 2020

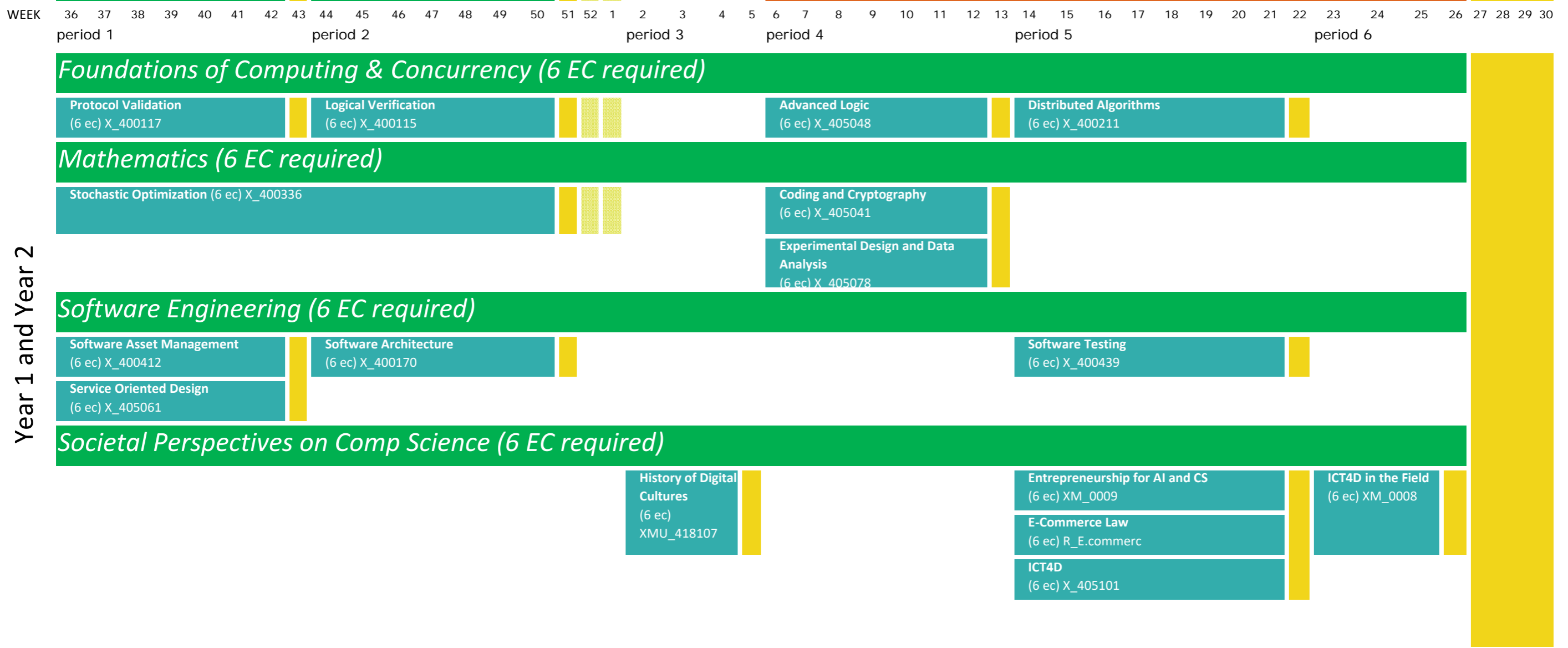
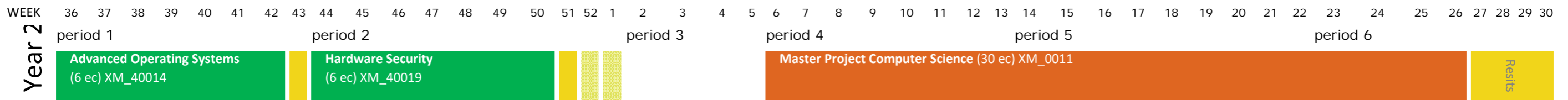
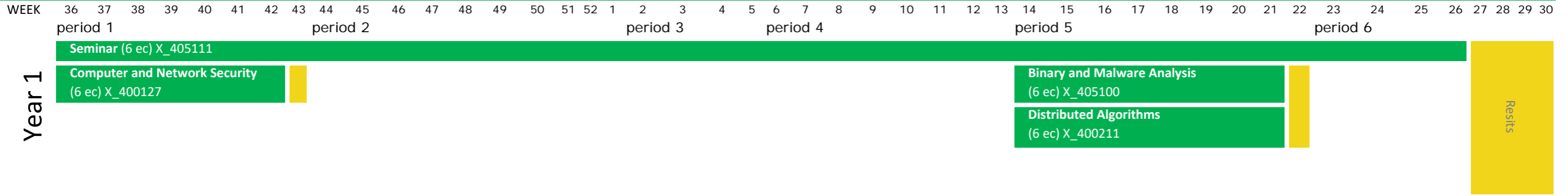
Specialization Big Data Engineering



Year 1 and Year 2

Software Asset Management (6 ec) X_400412	Software Architecture (6 ec) X_400170	Parallel System Architectures (6 ec) XMU_40015	Term Rewriting Systems (6 ec) XM_400121	Distributed Algorithms (6 ec) X_400211	Machine Learning for the Quantified Self (6 ec) XM_40012
Large Scale Data Engineering (6 ec) X_405116	Web Data Processing Systems (6 ec) XM_40020	High Performance Computing and Big Data (6 ec) XMU_40013	Information Visualization (6 ec) XMU_418143	Web Services and Cloud-based Systems (6 ec) XMU_418110	ICT4D in the Field (6 ec) XM_0008
Protocol Validation (6 ec) X_400117	Logical Verification (6 ec) X_400115		Advanced Logic (6 ec) X_405048	Software Testing (6 ec) X_400439	Project Systems Testing (6 ec) X_405124
Service Oriented Design (6 ec) X_405061	Concurrency Theory (6 ec) XMU_0012		The Social Web (6 ec) X_405086	Data Mining Techniques (6 ec) X_400108	
Computer and Network Security (6 ec) X_400127	Knowledge Engineering (6 ec) X_405099		Experimental Design and Data Analysis (6 ec) X_405078	ICT4D (6 ec) X_405101	
Knowledge and Media (6 ec) X_405065	Hardware Security (6 ec) XM_40019		Coding and Cryptography (6 ec) X_405041	Performance Engineering (6 ec) XMU_40016	
Evolutionary Computing (6 ec) X_400111	Performance of Networked Systems (6 ec) X_405105		Programming Multi-core and Many-core Sys. (6 ec) XMU_40018	Binary and Malware Analysis (6 ec) X_405100	
Introduction to Computational Science (6 ec) XMU_418111	Distributed Systems (6 ec) X_400130				
Advanced Operating Systems (6 ec) XM_40014	Internet programming (6 ec) X_405082				
Green Lab (6 ec) X_418158					
Programming Large-scale Parallel Systems (6 ec) XM_40017	Parallel Programming Practical (6 ec) X_400162				
Stochastic Optimization (6 ec) X_400336					
Lambda Calculus (6 ec) XMU_418108					
Industrial Internship (6 ec) XM_405080					
Individual Systems Practical (6 ec) XM_405088					
					Resits

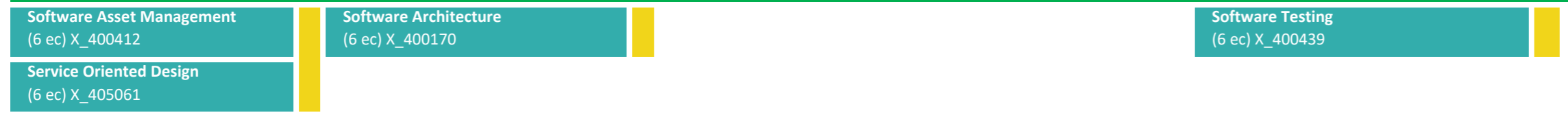
Specialization Computer Systems Security



Mathematics (6 EC required)



Software Engineering (6 EC required)



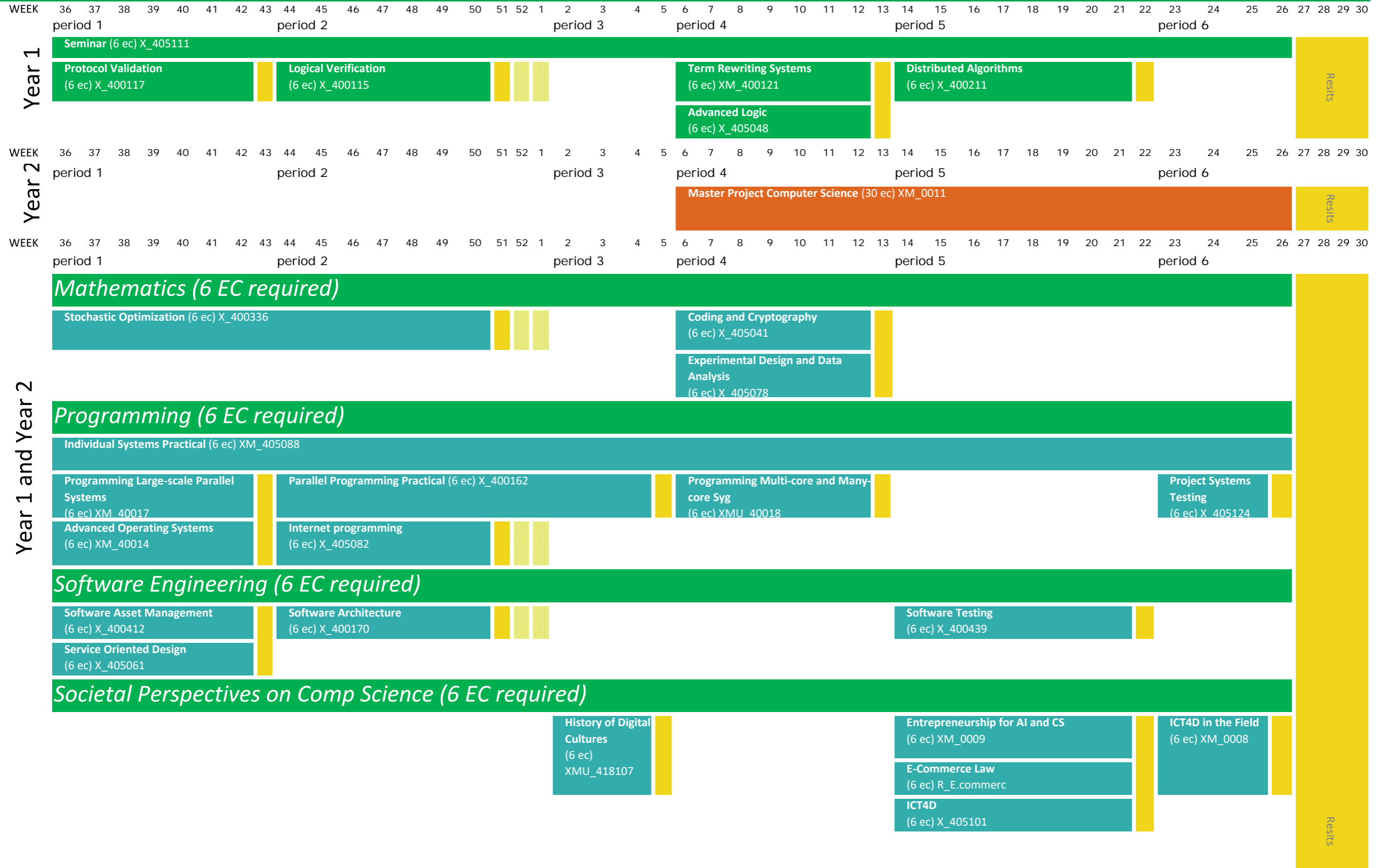
Societal Perspectives on Comp Science (6 EC required)



Year 1 and Year 2

Software Asset Management (6 ec) X_400412	Software Architecture (6 ec) X_400170	High Performance Computing and Big Data (6 ec) XMU_40013	Information Visualization (6 ec) XMU_418143	Web Services and Cloud-based Systems (6 ec) XMU_418110	Machine Learning for the Quantified Self (6 ec) XM_40012
Large Scale Data Engineering (6 ec) X_405116	Web Data Processing Systems (6 ec) XM_40020	Parallel System Architectures (6 ec) XMU_40015	Experimental Design and Data Analysis (6 ec) X_405078	Software Testing (6 ec) X_400439	ICT4D in the Field (6 ec) XM_0008
Protocol Validation (6 ec) X_400117	Hardware Security (6 ec) XM_40019		Programming Multi-core and Many-core Sys. (6 ec) XMU_40018	Data Mining Techniques (6 ec) X_400108	
Service Oriented Design (6 ec) X_405061	Logical Verification (6 ec) X_400115	Term Rewriting Systems (6 ec) XM_400121	Advanced Logic (6 ec) X_405048	Binary and Malware Analysis (6 ec) X_405100	Project Systems Testing (6 ec) X_405124
Computer and Network Security (6 ec) X_400127	Concurrency Theory (6 ec) XMU_0012		Coding and Cryptography (6 ec) X_405041	ICT4D (6 ec) X_405101	
Evolutionary Computing (6 ec) X_400111	Knowledge Engineering (6 ec) X_405099		Distributed Algorithms (6 ec) X_400211	Performance Engineering (6 ec) XMU_40016	
Knowledge and Media (6 ec) X_405065	Distributed Systems (6 ec) X_400130				
Advanced Operating Systems (6 ec) XM_40014	Internet programming (6 ec) X_405082				
Introduction to Computational Science (6 ec) XMU_418111	Performance of Networked Systems (6 ec) X_405105				
Green Lab (6 ec) X_418158					
Programming Large-scale Parallel Systems (6 ec) XM_40017	Parallel Programming Practical (6 ec) X_400162				
Stochastic Optimization (6 ec) X_400336					
Lambda Calculus (6 ec) XMU_418108					
Industrial Internship (6 ec) XM_405080					
Individual Systems Practical (6 ec) XM_405088					
Resits					

Specialization Foundations of Computing and Concurrency



Year 1 and Year 2

Software Asset Management (6 ec) X_400412	Software Architecture (6 ec) X_400170	High Performance Computing and Big Data (6 ec) XMU_40013 Parallel System Architectures (6 ec) XMU_40015	Programming Multi-core and Many-core Sys. (6 ec) XMU_40018	Software Testing (6 ec) X_400439	Machine Learning for the Quantified Self (6 ec) XM_40012
Service Oriented Design (6 ec) X_405061	Logical Verification (6 ec) X_400115		Term Rewriting Systems (6 ec) XM_400121	Performance Engineering (6 ec) XMU_40016	
Advanced Operating Systems (6 ec) XM_40014	Hardware Security (6 ec) XM_40019		Advanced Logic (6 ec) X_405048	ICT4D (6 ec) X_405101	
Protocol Validation (6 ec) X_400117	Performance of Networked Systems (6 ec) X_405105		The Social Web (6 ec) X_405086	Distributed Algorithms (6 ec) X_400211	Project Systems Testing (6 ec) X_405124
Computer and Network Security (6 ec) X_400127	Knowledge Engineering (6 ec) X_405099		Experimental Design and Data Analysis (6 ec) X_405078	Binary and Malware Analysis (6 ec) X_405100	
Evolutionary Computing (6 ec) X_400111	Distributed Systems (6 ec) X_400130		Information Visualization (6 ec) XMU_418143	Data Mining Techniques (6 ec) X_400108	
Introduction to Computational Science (6 ec) XMU_418111	Web Data Processing Systems (6 ec) XM_40020		Coding and Cryptography (6 ec) X_405041	Web Services and Cloud-based Systems (6 ec) XMU_418110	
Programming Large-scale Parallel Systems (6 ec) XM_40017	Internet programming (6 ec) X_405082				
	Parallel Programming Practical (6 ec) X_400162				
Stochastic Optimization (6 ec) X_400336					
Industrial Internship (6 ec) XM_405080					
Individual Systems Practical (6 ec) XM_405088					

Specialization Internet and Web Technology

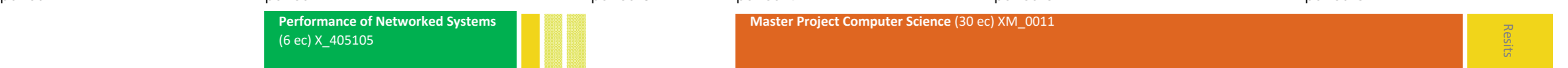
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 period 1 period 2 period 3 period 4 period 5 period 6

Year 1



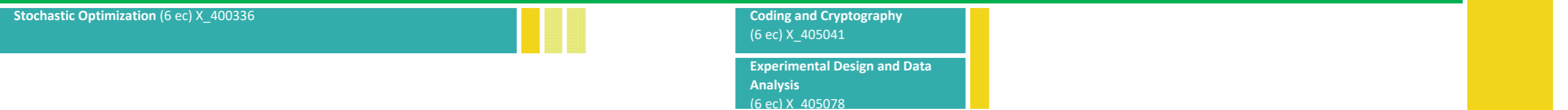
WEEK 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
 period 1 period 2 period 3 period 4 period 5 period 6

Year 2



WEEK 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
 period 1 period 2 period 3 period 4 period 5 period 6

Mathematics (6 EC required)

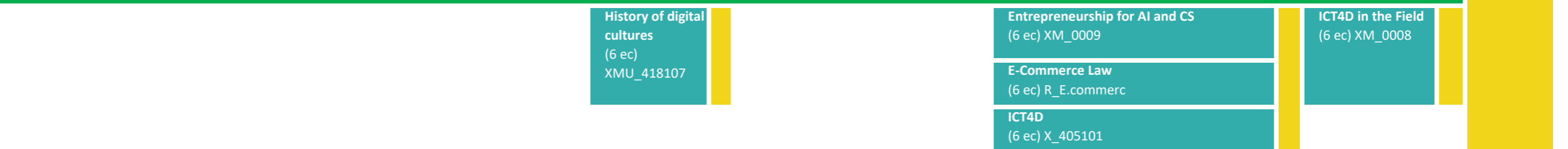


Software Engineering (6 EC required)



Year 1 and Year 2

Societal Perspectives on Comp Science (6 EC required)



Year 1 and Year 2

Protocol Validation (6 ec) X_400117	Software Architecture (6 ec) X_400170	High Performance Computing and Big Data (6 ec) XMU_40013	Term Rewriting Systems (6 ec) XM_400121	Distributed Algorithms (6 ec) X_400211	Machine Learning for the Quantified Self (6 ec) XM_40012
Software Asset Management (6 ec) X_400412	Logical Verification (6 ec) X_400115	Parallel System Architectures (6 ec) XMU_40015	Advanced Logic (6 ec) X_405048	Software Testing (6 ec) X_400439	ICT4D in the Field (6 ec) XM_0008
Service Oriented Design (6 ec) X_405061	Concurrency Theory (6 ec) XMU_0012		Programming Multi-core and Many-core Sys. (6 ec) XMU_40018	Binary and Malware Analysis (6 ec) X_405100	Project Systems Testing (6 ec) X_405124
Advanced Operating Systems (6 ec) XM_40014	Web Data Processing Systems (6 ec) XM_40020		Information Visualization (6 ec) XMU_418143	ICT4D (6 ec) X_405101	
Evolutionary Computing (6 ec) X_400111	Knowledge Engineering (6 ec) X_405099		The Social Web (6 ec) X_405086	Web Services and Cloud-based Systems (6 ec) XMU_418110	
Large Scale Data Engineering (6 ec) X_405116	Distributed Systems (6 ec) X_400130		Coding and Cryptography (6 ec) X_405041	Data Mining Techniques (6 ec) X_400108	
Computer and Network Security (6 ec) X_400127	Internet programming (6 ec) X_405082		Experimental Design and Data Analysis (6 ec) X_405078	Performance Engineering (6 ec) XMU_40016	
Programming Large-scale Parallel Systems (6 ec) XM_40017	Performance of Networked Systems (6 ec) X_405105				
Introduction to Computational Science (6 ec) XMU_418111	Hardware Security (6 ec) XM_40019				
Green Lab (6 ec) X_418158	Parallel Programming Practical (6 ec) X_400162				
Knowledge and Media (6 ec) X_405065					
Lambda Calculus (6 ec) XMU_418108					
Stochastic Optimization (6 ec) X_400336					
Industrial Internship (6 ec) XM_405080					
Individual Systems Practical (6 ec) XM_405088					

Resits

Specialization Parallel Computing Systems

WEEK 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
 period 1 period 2 period 3 period 4 period 5 period 6

Year 1

Seminar (6 ec) X_405111

Programming Large-scale Parallel Systems (6 ec) XM 40017

Parallel Programming Practical (6 ec) X_400162

Parallel System Architectures (6 ec) XMU 40015

Programming Multi-core and Many-core Sys. (6 ec) XMU 40018

Performance Engineering (6 ec) XMU_40016

Resits

WEEK 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
 period 1 period 2 period 3 period 4 period 5 period 6

Year 2

Master Project Computer Science (30 ec) XM_0011

Resits

WEEK 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
 period 1 period 2 period 3 period 4 period 5 period 6

Foundations of Computing & Concurrency (6 EC required)

Protocol Validation (6 ec) X_400117

Logical Verification (6 ec) X_400115

Advanced Logic (6 ec) X_405048

Distributed Algorithms (6 ec) X_400211

Mathematics (6 EC required)

Stochastic Optimization (6 ec) X_400336

Coding and Cryptography (6 ec) X_405041

Experimental Design and Data Analysis (6 ec) X_405078

Software Engineering (6 EC required)

Software Asset Management (6 ec) X_400412

Software Architecture (6 ec) X_400170

Software Testing (6 ec) X_400439

Service Oriented Design (6 ec) X_405061

Societal Perspectives on Comp Science (6 EC required)

History of Digital Cultures (6 ec) XMU_418107

Entrepreneurship for AI and CS (6 ec) XM_0009

E-Commerce Law (6 ec) R_E.commerc

ICT4D (6 ec) X_405101

ICT4D in the Field (6 ec) XM_0008

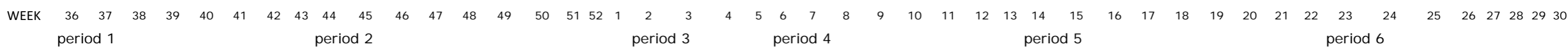
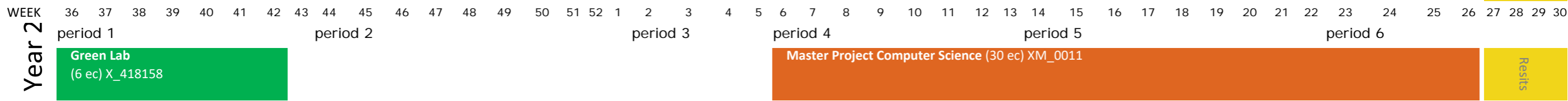
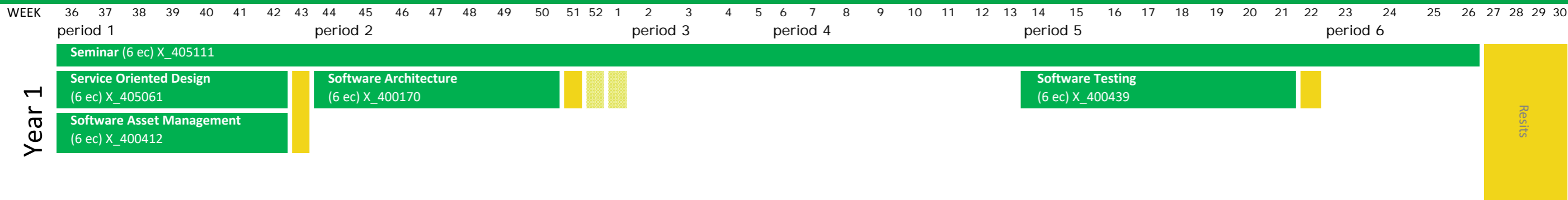
Year 1 and Year 2

Resits

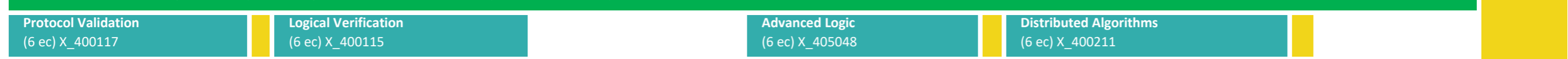
Year 1 and Year 2

Protocol Validation (6 ec) X_400117	Logical Verification (6 ec) X_400115	High Performance Computing and Big Data (6 ec) XMU_40013	Experimental Design and Data Analysis (6 ec) X_405078	Software Testing (6 ec) X_400439	Machine Learning for the Quantified Self (6 ec) XM_40012	Resits
Software Asset Management (6 ec) X_400412	Software Architecture (6 ec) X_400170		Coding and Cryptography (6 ec) X_405041	Distributed Algorithms (6 ec) X_400211		
Service Oriented Design (6 ec) X_405061	Concurrency Theory (6 ec) XMU_0012		Programming Multi-core and Many-core Sys. (6 ec) XMU_40018	ICT4D (6 ec) X_405101		
Programming Large-scale Parallel Systems (6 ec) XM_40017	Web Data Processing Systems (6 ec) XM_40020		Advanced Logic (6 ec) X_405048	Performance Engineering (6 ec) XMU_40016	Project Systems Testing (6 ec) X_405124	
Computer and Network Security (6 ec) X_400127	Hardware Security (6 ec) XM_40019		Information Visualization (6 ec) XMU_418143	Web Services and Cloud-based Systems (6 ec) XMU_418110		
Evolutionary Computing (6 ec) X_400111	Performance of Networked Systems (6 ec) X_405105		The Social Web (6 ec) X_405086	Binary and Malware Analysis (6 ec) X_405100		
Green Lab (6 ec) X_418158	Knowledge Engineering (6 ec) X_405099		Term Rewriting Systems (6 ec) XM_400121	Data Mining Techniques (6 ec) X_400108		
Large Scale Data Engineering (6 ec) X_405116	Internet programming (6 ec) X_405082					
Introduction to Computational Science (6 ec) XMU_418111	Distributed Systems (6 ec) X_400130					
Advanced Operating Systems (6 ec) XM_40014						
Knowledge and Media (6 ec) X_405065	Parallel Programming Practical (6 ec) X_400162					
Stochastic Optimization (6 ec) X_400336						
Lambda Calculus (6 ec) XMU_418108						
Industrial Internship (6 ec) XM_405080						
Individual Systems Practical (6 ec) XM_405088						

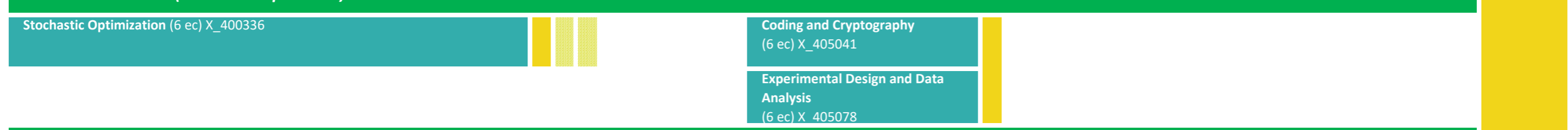
Specialization Software Engineering and Green IT



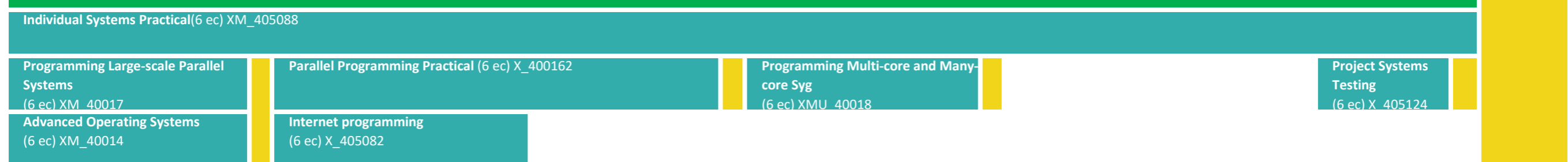
Foundations of Computing & Concurrency (6 EC required)



Mathematics (6 EC required)



Programming (6 EC required)

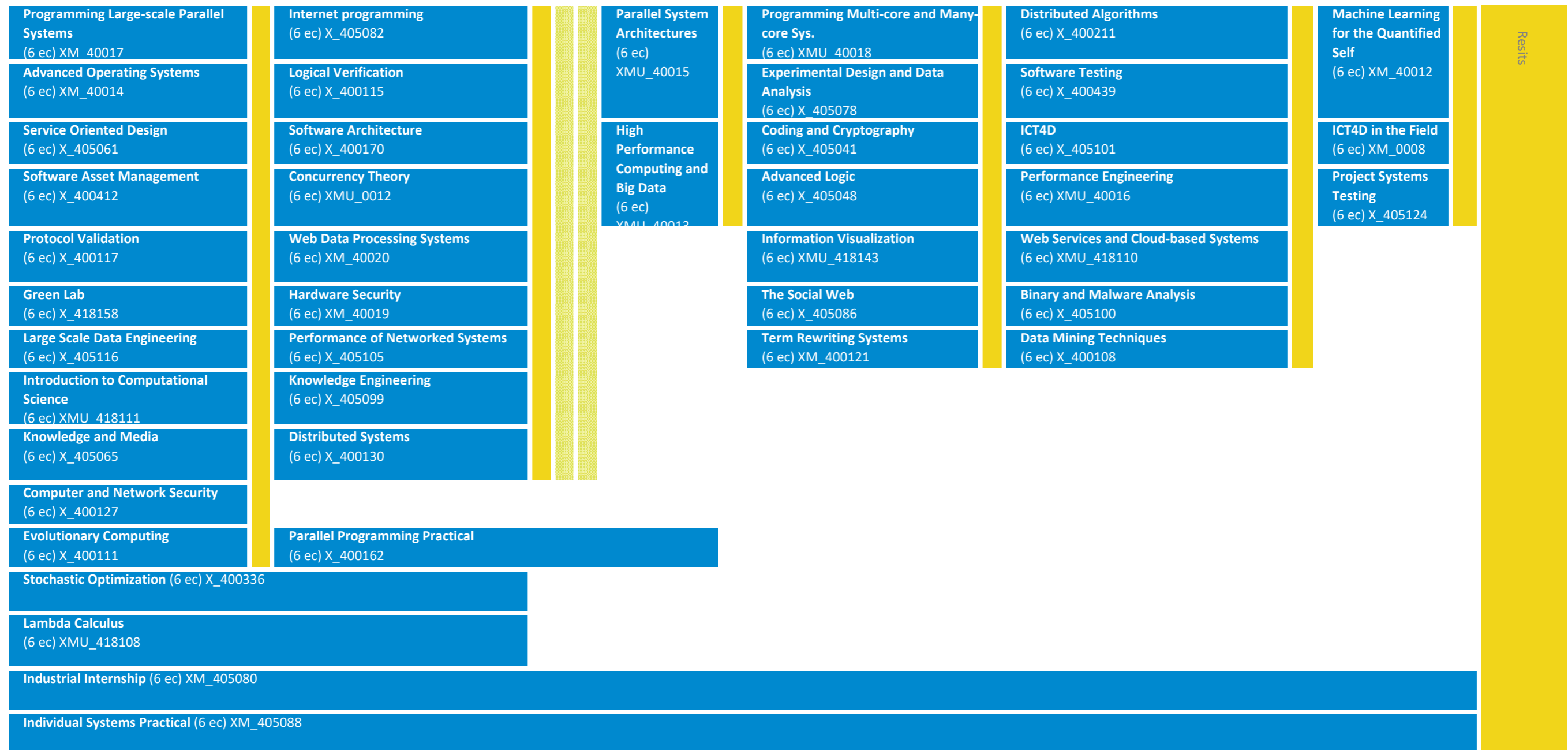


Societal Perspectives on Comp Science (6 EC required)



Year 1 and Year 2

Year 1 and Year 2



Resits	P1	P2	P3	P4	P5	P6
Information Sciences	wk 2	wk 6	wk 14	wk 23	wk 27	wk 29
Natural Sciences & Mathematics	wk 2	wk 6	wk 14	wk 23	wk 27	wk 29
Health & Life Sciences	wk 2	wk 6	wk 14	wk 23	wk 27	wk 29
Earth, Ecological & Environmental Sciences	wk 2	wk 12*	wk 12*	wk 28**	wk 27/28***	wk 29

*week 12 for Programmes with Fieldwork

**week 28 for Programmes with Fieldwork

***week 27/28 for Programmes with Fieldwork