



Academic year 2024-2025

Master in Informatics (MSI)

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Major in Artificial Intelligence

Study plan

1st semester (SA 2024-2025)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Chuprikov		6
High-Performance Computing	Schenk, Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Advanced Topics in Machine Learning	Alippi, Carman	Artificial Intelligence	6
Advanced Topics in Visual Computing	Didyk	Geometric and Visual Computing	3
Artificial Intelligence (MSc)	Lanzi	Artificial Intelligence	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Mobile and Wearable Computing	Gjoreski	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3
Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6

Free-choice courses			6
2nd semester (SP 2025)			
Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6
Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems; Information Systems	6
Business Process Modeling, Management and Mining	Pautasso	Information Systems	3
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Programming languages	6
Computer Vision & Pattern Recognition	Hormann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Artificial Intelligence	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Free-choice courses			6
3rd semester (SA 2025-2026)			
Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Eugster		6
High-Performance Computing	Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6
Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory	6

		and Algorithms	
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Mobile and Wearable Computing	Santini	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3
Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

4th semester (SP 2026)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6
Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems	6
Advanced Topics in Machine Learning	Alippi	Artificial Intelligence	6
Business Process Modeling, Management and Mining	Pautasso	Information Systems	3
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Information Systems; Programming languages	6
Computer Vision & Pattern Recognition	Engelmann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Geometric and Visual Computing	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Software Quality & Testing	Pezzè	Software Development	6

Master Thesis	Artificial Intelligence; Computer Systems; Geometric and Visual Computing; Information Systems; Programming languages; Software Development; Theory and Algorithms	30
Free-choice courses		6

Students have the possibility to obtain a major/minor **Major in Artificial Intelligence** upon completion of **18 ECTS** of **"Artificial Intelligence"** tagged courses or activities.

Major in Computer Systems

Study plan

1st semester (SA 2024-2025)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Chuprikov		6
High-Performance Computing	Schenk, Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Advanced Topics in Machine Learning	Alippi, Carman	Artificial Intelligence	6
Advanced Topics in Visual Computing	Didyk	Geometric and Visual Computing	3
Artificial Intelligence (MSc)	Lanzi	Artificial Intelligence	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Mobile and Wearable Computing	Gjoreski	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3
Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

2nd semester (SP 2025)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems; Information Systems	6
Business Process Modeling,	Pautasso	Information Systems	3

Management and Mining			
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Programming languages	6
Computer Vision & Pattern Recognition	Hormann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Artificial Intelligence	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Free-choice courses			6

3rd semester (SA 2025-2026)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Eugster		6
High-Performance Computing	Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Mobile and Wearable Computing	Santini	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3

Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6
4th semester (SP 2026)			
Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6
Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems	6
Advanced Topics in Machine Learning	Alippi	Artificial Intelligence	6
Business Process Modeling, Management and Mining	Pautasso	Information Systems	3
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Information Systems; Programming languages	6
Computer Vision & Pattern Recognition	Engelmann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Geometric and Visual Computing	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Software Quality & Testing	Pezzè	Software Development	6
Master Thesis		Artificial Intelligence; Computer Systems; Geometric and Visual Computing; Information Systems; Programming languages; Software Development; Theory and Algorithms	30
Free-choice courses			6

Students have the possibility to obtain a major/minor **Major in Computer Systems** upon completion of **18 ECTS** of **"Computer Systems"** tagged courses or activities.

Major in Geometric and Visual Computing

Study plan

1st semester (SA 2024-2025)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Chuprikov		6
High-Performance Computing	Schenk, Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Advanced Topics in Machine Learning	Alippi, Carman	Artificial Intelligence	6
Advanced Topics in Visual Computing	Didyk	Geometric and Visual Computing	3
Artificial Intelligence (MSc)	Lanzi	Artificial Intelligence	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Mobile and Wearable Computing	Gjoreski	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3
Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

2nd semester (SP 2025)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems; Information Systems	6
Business Process Modeling,	Pautasso	Information Systems	3

Management and Mining			
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Programming languages	6
Computer Vision & Pattern Recognition	Hormann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Artificial Intelligence	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Free-choice courses			6

3rd semester (SA 2025-2026)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Eugster		6
High-Performance Computing	Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Mobile and Wearable Computing	Santini	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3

Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

4th semester (SP 2026)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems	6
Advanced Topics in Machine Learning	Alippi	Artificial Intelligence	6
Business Process Modeling, Management and Mining	Pautasso	Information Systems	3
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Information Systems; Programming languages	6
Computer Vision & Pattern Recognition	Engelmann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Geometric and Visual Computing	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Software Quality & Testing	Pezzè	Software Development	6

Master Thesis		Artificial Intelligence; Computer Systems; Geometric and Visual Computing; Information Systems; Programming languages; Software Development; Theory and Algorithms	30
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Free-choice courses			6
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Students have the possibility to obtain a major/minor **Major in Geometric and Visual Computing** upon completion of **18 ECTS** of **"Geometric and Visual Computing"** tagged courses or activities.

Major in Information Systems

Study plan

1st semester (SA 2024-2025)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Chuprikov		6
High-Performance Computing	Schenk, Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Advanced Topics in Machine Learning	Alippi, Carman	Artificial Intelligence	6
Advanced Topics in Visual Computing	Didyk	Geometric and Visual Computing	3
Artificial Intelligence (MSc)	Lanzi	Artificial Intelligence	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Mobile and Wearable Computing	Gjoreski	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3
Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

2nd semester (SP 2025)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems; Information Systems	6
Business Process Modeling,	Pautasso	Information Systems	3

Management and Mining			
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Programming languages	6
Computer Vision & Pattern Recognition	Hormann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Artificial Intelligence	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Free-choice courses			6

3rd semester (SA 2025-2026)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Eugster		6
High-Performance Computing	Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Mobile and Wearable Computing	Santini	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3

Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6
4th semester (SP 2026)			
Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6
Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems	6
Advanced Topics in Machine Learning	Alippi	Artificial Intelligence	6
Business Process Modeling, Management and Mining	Pautasso	Information Systems	3
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Information Systems; Programming languages	6
Computer Vision & Pattern Recognition	Engelmann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Geometric and Visual Computing	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Software Quality & Testing	Pezzè	Software Development	6
Master Thesis		Artificial Intelligence; Computer Systems; Geometric and Visual Computing; Information Systems; Programming languages; Software Development; Theory and Algorithms	30
Free-choice courses			6

Students have the possibility to obtain a major/minor **Major in Information Systems** upon completion of **18 ECTS** of **"Information Systems"** tagged courses or activities.

Major in Programming Languages

Study plan

1st semester (SA 2024-2025)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Chuprikov		6
High-Performance Computing	Schenk, Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Advanced Topics in Machine Learning	Alippi, Carman	Artificial Intelligence	6
Advanced Topics in Visual Computing	Didyk	Geometric and Visual Computing	3
Artificial Intelligence (MSc)	Lanzi	Artificial Intelligence	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Mobile and Wearable Computing	Gjoreski	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3
Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

2nd semester (SP 2025)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems; Information Systems	6
Business Process Modeling,	Pautasso	Information Systems	3

Management and Mining			
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Programming languages	6
Computer Vision & Pattern Recognition	Hormann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Artificial Intelligence	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Free-choice courses			6

3rd semester (SA 2025-2026)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Eugster		6
High-Performance Computing	Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Mobile and Wearable Computing	Santini	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3

Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

4th semester (SP 2026)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems	6
Advanced Topics in Machine Learning	Alippi	Artificial Intelligence	6
Business Process Modeling, Management and Mining	Pautasso	Information Systems	3
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Information Systems; Programming languages	6
Computer Vision & Pattern Recognition	Engelmann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Geometric and Visual Computing	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Software Quality & Testing	Pezzè	Software Development	6

Master Thesis		Artificial Intelligence; Computer Systems; Geometric and Visual Computing; Information Systems; Programming languages; Software Development; Theory and Algorithms	30
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Free-choice courses			6
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Students have the possibility to obtain a major/minor **Major in Programming Languages** upon completion of **18 ECTS** of **"Programming languages"** tagged courses or activities.

Major in Software Development

Study plan

1st semester (SA 2024-2025)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Chuprikov		6
High-Performance Computing	Schenk, Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Advanced Topics in Machine Learning	Alippi, Carman	Artificial Intelligence	6
Advanced Topics in Visual Computing	Didyk	Geometric and Visual Computing	3
Artificial Intelligence (MSc)	Lanzi	Artificial Intelligence	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Mobile and Wearable Computing	Gjoreski	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3
Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

2nd semester (SP 2025)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems; Information Systems	6
Business Process Modeling,	Pautasso	Information Systems	3

Management and Mining			
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Programming languages	6
Computer Vision & Pattern Recognition	Hormann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Artificial Intelligence	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Free-choice courses			6

3rd semester (SA 2025-2026)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Eugster		6
High-Performance Computing	Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Mobile and Wearable Computing	Santini	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3

Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

4th semester (SP 2026)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems	6
Advanced Topics in Machine Learning	Alippi	Artificial Intelligence	6
Business Process Modeling, Management and Mining	Pautasso	Information Systems	3
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Information Systems; Programming languages	6
Computer Vision & Pattern Recognition	Engelmann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Geometric and Visual Computing	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Software Quality & Testing	Pezzè	Software Development	6

Master Thesis		Artificial Intelligence; Computer Systems; Geometric and Visual Computing; Information Systems; Programming languages; Software Development; Theory and Algorithms	30
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Free-choice courses			6
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Students have the possibility to obtain a major/minor **Major in Software Development** upon completion of **18 ECTS** of **"Software Development"** tagged courses or activities.

Major in Theory and Algorithms

Study plan

1st semester (SA 2024-2025)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Chuprikov		6
High-Performance Computing	Schenk, Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Advanced Topics in Machine Learning	Alippi, Carman	Artificial Intelligence	6
Advanced Topics in Visual Computing	Didyk	Geometric and Visual Computing	3
Artificial Intelligence (MSc)	Lanzi	Artificial Intelligence	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Mobile and Wearable Computing	Gjoreski	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3
Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6

2nd semester (SP 2025)

Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems; Information Systems	6
Business Process Modeling,	Pautasso	Information Systems	3

Management and Mining			
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Programming languages	6
Computer Vision & Pattern Recognition	Hormann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Artificial Intelligence	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Free-choice courses			6

3rd semester (SA 2025-2026)

Core (30 ECTS)	Lecturers	Tags	ECTS
Algorithms & Complexity	Papadopoulou		6
Distributed Systems	Eugster		6
High-Performance Computing	Eftekhari		6
Machine Learning (MSc)	Wand		6
Software Design & Modeling	Furia		6

Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Java Programming	Binder, Rosà	Programming languages	6
Computer Aided Verification	Sharygina	Computer Systems; Programming languages; Software Development; Theory and Algorithms	6
Deep Learning Lab	Vercesi	Artificial Intelligence	3
Distributed Algorithms	Pedone	Computer Systems; Information Systems	6
Edge Computing in the IoT	Ferrante	Computer Systems	6
Graph Deep Learning	Alippi	Geometric and Visual Computing	3
Mobile and Wearable Computing	Santini	Computer Systems; Information Systems; Software Development	6
Numerical Algorithms	Hormann	Theory and Algorithms	6
Programming Styles	Hauswirth	Programming languages; Software Development	3

Software Performance	Hauswirth	Programming languages; Software Development	6
User Experience Design	Landoni, Langheinrich	Information Systems	6
Free-choice courses			6
4th semester (SP 2026)			
Core (6 ECTS)	Lecturers	Tags	ECTS
Information Security	Langheinrich		6
Elective (15 ECTS)	Lecturers	Tags	ECTS
Advanced Networking	Carzaniga	Computer Systems	6
Advanced Topics in Machine Learning	Alippi	Artificial Intelligence	6
Business Process Modeling, Management and Mining	Pautasso	Information Systems	3
Computational Fabrication	Didyk	Geometric and Visual Computing	6
Computer Architectures and Logic Design	Pozzi	Computer Systems; Information Systems; Programming languages	6
Computer Vision & Pattern Recognition	Engelmann	Geometric and Visual Computing	6
Data Analytics	Crestani, Bucur-Cosma	Information Systems	6
Geometric Algorithms	Papadopoulou	Geometric and Visual Computing; Theory and Algorithms	6
Image and Video Processing	Didyk	Geometric and Visual Computing	6
Information & Physics	Wolf	Theory and Algorithms	3
Quantum Computing	Wolf	Theory and Algorithms	6
Robotics	Giusti	Geometric and Visual Computing	6
Security Aspects of Machine Learning	Regazzoni	Artificial Intelligence; Computer Systems	3
Software Analysis	Furia	Programming languages; Software Development	6
Software Architecture	Pautasso	Software Development	6
Software Quality & Testing	Pezzè	Software Development	6
Master Thesis		Artificial Intelligence; Computer Systems; Geometric and Visual Computing; Information Systems; Programming languages; Software Development; Theory and Algorithms	30
Free-choice courses			6

Students have the possibility to obtain a major/minor **Major in Theory & Algorithms** upon completion of **18 ECTS** of "**Theory and Algorithms**" tagged courses or activities.