

## Computer Science BSc course list

In the table below you can find the courses that you are expected to study in each semester and their prerequisites (courses that have to be completed beforehand). P stands for practice, L is for lecture. If a subject has both practice and lecture, you have to pass the practical part before you can take the exam from the lecture. The exception is Computer graphics, where you can complete the practice and the lecture independently. Some subjects are P+L type, which means that you will have both practice and lecture lessons, but you will only get one combined grade for them.

Please bear in mind that on top of these subjects, you also need to complete 9 credits from elective courses.

This table does not include the preliminary year subjects (Basic English I-II., Introduction to mathematics I-II., Introduction to informatics I-II.).

Semester	Name of course	Prerequisite
<b>1</b>	Preparation course for academic studies P (IP-12fTMKG) <i>(for students enrolled in or after September 2016)</i>	-
	Precalculus practices P (IP-12fMATAG)	successful entry test or completing the preliminary year
	Linear algebra P (IP-12fLAG)	
	Linear algebra L (IP-12fLAE)	
	Discrete mathematics I. P (IP-12fDM1G)	
	Discrete mathematics I. L (IP-12fDM1E)	
	Programming fundamentals P+L (IP-12fPAEG)	
	Fundamentals of computers P+L (IP-12fSZGAEG)	
	Basic legal and business knowledge L (IP-12fJMIE)	
	Principles of economics L (IP-12fKGAE)	

<b>Semester</b>	<b>Name of course</b>	<b>Prerequisite</b>
<b>2</b>	Analysis I. P (IP-12fAN1G)	Precalculus practices
	Analysis I. L (IP-12fAN1E)	
	Discrete mathematics II. P (IP-12fDM2G)	Discrete mathematics I.
	Discrete mathematics II. L (IP-12fDM2E)	
	Formal languages P (IP-12fFNYG)	Discrete mathematics I.
	Formal languages L (IP-12fFNYE)	
	Programming P+L (IP-12fPROGEG)	Programming fundamentals
	Functional programming P (IP-12fFUNPEG)	Programming fundamentals

<b>Semester</b>	<b>Name of course</b>	<b>Prerequisite</b>
<b>3</b>	Analysis II. P (IP-12fAN2G)	Analysis I.
	Analysis II. L (IP-12fAN2E)	
	Numerical methods I. P (IP-12fNM1G)	Analysis I., Linear algebra
	Numerical methods I. L (IP-12fNM1E)	
	Algorithms and data structures I. P (IP-12fAA1G)	Programming
	Algorithms and data structures I. L (IP-12fAA1E)	
	Computer graphics P (IP-12fSZGG)	Linear algebra, Programming
	Computer graphics L (IP-12fSZGE)	Linear algebra
	Programming languages (JAVA) P+L (IP-12fPNY2EG)	Programming
	Practical software engineering I. P+L (IP-12fPROGT1EG)	Programming

<b>Semester</b>	<b>Name of course</b>	<b>Prerequisite</b>
<b>4</b>	Analysis III. P+L (IP-12fAN3EG)	Analysis II.
	Numerical methods II. P (IP-12fNM2G)	Numerical methods I.
	Algorithms and data structures II. P (IP-12fAA2G)	Algorithms and data structures I.
	Algorithms and data structures II. L (IP-12fAA2E)	
	Operating systems P+L (IP-12fOPREG)	Programming, Fundamentals of computers
	Programming languages (C++) P+L (IP-12fPNY1EG)	Programming
	Practical software engineering II. P+L (IP-12fPROGT2EG)	Practical software engineering I.
	Databases I. P (IP-12fAB1G)	Algorithms and data structures I.
	Databases I. L (IP-12fAB1E)	

<b>Semester</b>	<b>Name of course</b>	<b>Prerequisite</b>
<b>5</b>	Models and algorithms P (IP-12fMODALEG)	Analysis III.
	Probability and statistics P (IP-12fVSZG)	Analysis II.
	Probability and statistics L (IP-12fVSZE)	
	Compilers P (IP-12fFPG)	Formal languages, Programming languages (C++)
	Compilers L (IP-12fFPE)	
	Computer networks P (IP-12fSZHG)	Programming languages (C++)
	Computer networks L (IP-12fSZHE)	
	Logic and theory of computation P (IP-12fLSZEG)	Discrete mathematics II., Formal languages
	Logic and theory of computation L (IP-12fLSZEE)	
	Application development P (IP-12fALKEG)	Practical software engineering II.
	Databases II. P (IP-12fAB2G)	Databases I.
	Databases II. L (IP-12fAB2E)	

<b>Semester</b>	<b>Name of course</b>	<b>Prerequisite</b>
<b>6</b>	Artificial intelligence L (IP-12fMIAE)	Algorithms and data structures II.
	Distributed systems P (IP-12fORG)	Programming languages (C++)
	Distributed systems L (IP-12fORE)	
	Tools of software projects P (IP-12fPRJG)	Programming languages (C++)