

Computer Science (Major)								
semester	Code	Title	Prerequisite	ECTS	Status	Instructor	EQE module	ABET module
1	MATH150	Calculus I	No Prerequisite	6	Mandatory	Mariam Manjikashvili, Mariam Mikelashvili	Free Component	Math
1	CS50	Introduction to Programming	No Prerequisite	6	Mandatory	Giorgi akhalaia, Givi gventsadze	Major	CS
1	Q185/R576/P434	English Language Course C1-1 / Practical Course of German I / Practical Course of Georgian for Foreigners (A1.1)	No Prerequisite	6	Elective: Language	Nino Rukhadze, Nino Tsulaia, Maia Damenia	Free Component	General Education
1	P432	Introduction to Modern Thought I	No Prerequisite	6	Mandatory	Gia Nodia, Tamar Tolordava	Free Component	General Education
1	CS212	Cyberlaw and Ethics	No Prerequisite	6	Mandatory	Nino Niauri	Major	CS
2	MATH151	Calculus II	MATH150	6	Mandatory	Mariam Manjikashvili, Mariam Mikelashvili	Free Component	Math
2	CS211	Object Oriented Programming	CS50	6	Mandatory	Guga Rukhadze	Major	CS
2	Q955/S058/P736	English Language Course C1-2/ Practical Course of German II / Practical Course of Georgian for Foreigners (A1.2)	Q185/R576/P434	6	Elective: Language	Nino Rukhadze, Nino Tsulaia, Maia Damenia	Free Component	General Education
2	DE112	Mathematical Foundation of Computing	MATH150, CS50	6	Mandatory	Maia Mrevlishvili	Major	Math
2	DE111	Computer Organization	CS50	6	Mandatory	Amiran Malania	Major	CS
3	MATH252	Calculus III	MATH151	6	Mandatory	Mariam Manjikashvili, Mariam Mikelashvili	Free Component	Math
3	CS311	Programming Languages	CS211	6	Mandatory	Guga Rukhadze	Major	CS
3	MATH254	Introduction to Linear Algebra	MATH151	6	Mandatory	Maia Mrevlishvili	Free Component	Math
3		Elective: Science		8	Elective: Science		Free Component	Science
3		Elective		6	Elective		Major	CS
4	EE300	Computational and Statistical Methods	MATH252, MATH254	6	Mandatory	Ivane Murusidze	Major	Math
4	CS312	Computer and Data Networks	DE111	6	Mandatory	Giorgi Akhalaia	Major	CS
4	CS221	Algorithms and Data Structures	CS211	6	Mandatory	Giorgi Partskhaladze	Major	CS
4	MATH311	Principles of Numerical Methods	MATH254	6	Mandatory	Avtandil Tavkhelidze	Major	Math
4		Elective: Science		6	Elective: Science		Free Component	Science
5	CS223	Introduction to Cybersecurity	CS312	6	Mandatory	Giorgi Akhalaia	Major	CS
5	CS313	Elements of Computational Complexity	EE300, MATH311	6	Mandatory	Shota Tsiskaridze	Major	CS
5	DE101	Introduction to Operating Systems	CS312, CS221	6	Mandatory	Paata Gogishvili	Major	CS
5	P737	Academic Techniques	No Prerequisite	6	Mandatory	Academic Writing Center	Free Component	General Education
5		Elective		6	Elective		Major	CS
6	CS321	Introduction to Machine Learning	MATH311, DE101	6	Mandatory	Erekle Magradze	Major	CS
6	CS322	Databases and Information Systems	CS313	6	Mandatory	Mariam Vadachkoria	Major	CS
6	CS323	Design Patterns	CS313, DE101	6	Mandatory	David Nadaraia, Tornike Shavishvili	Major	CS
6	CS314	Distributed and Parallel Computing	CS313, DE101	6	Mandatory	Erekle Magradze	Major	CS
6		Elective		6	Elective		Major	CS
7	CS411	Nand2Tetris	DE101	6	Mandatory	Davit Chkhaidze	Major	CS
7	CS413	Web Programming	CS314, CS322, CS323	6	Mandatory	Davit Datunashvili	Major	CS
7	To28	IT Project Management	CS50	6	Mandatory	Nino Kodzakhidze	Major	CS
7	DE115	Computer and Society	No Prerequisite	6	Mandatory	Tamar Kalkhitashvili	Major	CS
7		Elective		6	Elective		Major	CS
8	CS424	DevOps Technologies	CS411, CS413	6	Mandatory	Erekle Mikiashvili	Major	CS
8	CS422	Functional Programming	CS413	6	Mandatory	Davit Datunashvili	Major	CS
8	CS423	Senior Design Project	CS411, CS413, To28, DE115	12	Mandatory	Erekle Magradze, Giorgi Akhalaia	Major	CS
8		Elective		6	Elective		Major	CS
Science Electives								
3	CHEM100	Introduction to General Chemistry (Including Lab)	No Prerequisite	8	Elective: Science	Ketevan Kupatadze	Free Component	Science
3	PHYS195	Basics of Physics I (Including Lab)	Co-requisite: MATH150	8	Elective: Science	Giorgi Dalakishvili, Iuri Baghaturia, Shota Garuchava	Free Component	Science
4	PHYS196	Basics of Physics II	PHYS195	6	Elective: Science	Giorgi Dalakishvili, Shota Garuchava	Free Component	Science
4	BIOL100	Biology for Engineers (Including Lab)	No Prerequisite	6	Elective: Science	Natalia Kiknadze	Free Component	Science
Electives								
3	CS214	Introduction to Computational Linguistics	CS50, DE112	6	Elective	Irina Lobzhanidze	Major	CS
3	U589	AWS Cloud Practitioner	CS50	6	Elective	Erekle Magradze	Major	CS
3	U837	Drones	No Prerequisite	6	Elective	Avtandil Mghebrishvili	Major	CS
5	CS327	Computer Vision	EE300	6	Elective	David Nadaraia	Major	CS
5	DE114	Exploratory Data Analysis with Python	CS50	6	Elective	Gvantsa Mchedlidze	Major	CS
5	DE120	Introduction to Energy Systems and Technologies	No Prerequisite	6	Elective	Murman Margvelashvili	Major	CS
6	CS324	Artificial Neural Networks	EE300	6	Elective	Paata Gogishvili	Major	CS
6	CS326	System Programming	DE111	6	Elective	Amiran Malania	Major	CS
7	CS412	Unix/Linux System Administration	DE101	6	Elective	Tornike Maridashvili	Major	CS
7	S826	Introduction to Computer Modeling	MATH151, CS211	6	Elective	Ivane Murusidze	Major	CS
8	CS415	Introduction to Information Theory	CS321	6	Elective	Erekle Magradze	Major	CS
8	CS417	Introduction to Natural Language Processing	CS321	6	Elective	Irina Lobzhanidze	Major	CS
8	CS421	Mobile Applications Development	DE111	6	Elective	Amiran Malania	Major	CS

8	CS425	Message Queueing and Data Streaming	Co-requisite: CS322	6	Elective	Erekle Magradze	Major	CS
8	CS426	Big Data Systems	Co-requisite: CS322	6	Elective	Erekle Magradze	Major	CS
8	DE116	Hardware Design and Prototyping	CS50	6	Elective	Avtandil Mghebrishvili	Major	CS
8	DE117	Systems, sustainability and climate change - introduction	No Prerequisite	6	Elective	Murman Margvelashvili	Major	CS
8	UNI007	Introduction to Artificial Intelligence	No Prerequisite	6	Elective	Paata Gogishvili	Major	CS