

Computer Science (Major)

sen	Code	Title	Prerequisite	ECTS	Status	Instructor	EQE module	ABET module
1	MATH150	Calculus I	No Prerequisite	6	Mandatory	Nino Manjavidze, Mariam Manjikashvili	Free Component	Math & Basic Science
1	CS212	Cyberlaw and Ethics	No Prerequisite	6	Mandatory	Nino Niauri or Nino Jincharadze	Major	CS
1	Q185/R576/	English Language Course C1-1 / Practical Course	No Prerequisite	6	Elective: Language	Nino Rukhadze, Nino Tsulaia, Maia Dar	Free Component	General Education
1	P432	Introduction to Modern Thought I	No Prerequisite	6	Mandatory	Gia Nodia, Tamar Tolordava	Free Component	General Education
1	CS50	Introduction to Programming	No Prerequisite	6	Mandatory	Erekle Magradze, Giorgi Veshapidze, Pa	Major	CS
2	MATH151	Calculus II	MATH150	6	Mandatory	Nino Manjavidze, Mariam Manjikashvili	Free Component	Math & Basic Science
2	CS211	Object Oriented Programming	CS50	6	Mandatory	Hongbo Yang	Major	CS
2	Q955/S058/	English Language Course C1-2/ Practical Course	Q185/R576/P434	6	Elective: Language	Nino Rukhadze, Nino Tsulaia, Maia Dar	Free Component	General Education
2	DE112	Mathematical Foundation of Computing	MATH150, CS50	6	Mandatory	Maia Mrevlishvili	Major	Math & Basic Science
2	DE111	Computer Organization	CS50	6	Mandatory	Amiran Malania	Major	CS
3	MATH252	Calculus III	MATH151	6	Mandatory	Nino Manjavidze, Mariam Manjikashvili	Free Component	Math & Basic Science
3	CS311	Programming Languages	CS211	6	Mandatory	Revaz Tatishvili	Major	CS
3	MATH254	Introduction to Linear Algebra	MATH151	6	Mandatory	Ivane Murusidze	Free Component	Math & Basic Science
3		Elective: Science		8	Elective: Science		Free Component	Math & Basic Science
3		Elective		6	Elective		Major	CS
4	EE300	Computational and Statistical Methods	MATH252	6	Mandatory	Shota Tsiskaridze	Major	CS
4	CS312	Computer and Data Networks	DE111	6	Mandatory	Archil Shengelia	Major	CS
4	CS221	Algorithms and Data Structures	CS50	6	Mandatory	Shota Tsiskaridze	Major	CS
4	MATH311	Principles of Numerical Methods	MATH252, MATH254	6	Mandatory	Maia Mrevlishvili	Major	CS
4		Elective: Science		6	Elective: Science		Free Component	Math & Basic Science
5	CS223	Introduction to Cybersecurity	CS312	6	Mandatory	Paata Gogishvili	Major	CS
5	CS313	Elements of Computational Complexity	CS211, DE112	6	Mandatory	Shota Tsiskaridze	Major	CS
5	DE101	Introduction to Operating Systems	DE111	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	CS50, MATH254	6	Mandatory	Shota Tsiskaridze	Major	CS
6	CS322	Databases and Information Systems	CS312, CS221	6	Mandatory	Tornike Shavishvili	Major	CS
6	CS323	Design Patterns	CS221, CS311	6	Mandatory	David Nadaraia	Major	CS
6		Elective		6	Elective		Major	CS
6		Elective		6	Elective		Major	CS
7	CS411	Nand2Tetris	DE111	6	Mandatory	Erekle Magradze	Major	CS
7	CS413	Web Programming	CS50	6	Mandatory	Teimuraz Tutberidze	Major	CS
7	To28	IT Project Management	CS50	6	Mandatory	Nino Kodzakhidze	Major	CS
7		Elective		6	Elective		Major	CS
7		Elective		6	Elective		Major	CS
8	CS424	DevOps Technologies	DE101, CS312	6	Mandatory	Erekle Magradze	Major	CS
8	CS422	Functional Programming	CS311	6	Mandatory		Major	CS
8	CS423	Senior Design Project	CS321, CS322, CS411, CS4	12	Mandatory	Erekle Magradze, Paata Gogishvili, Revaz	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	Major	Math & Basic Science
3	PHYS195	Basics of Physics I (Including Lab)	Co-requisite: MATH150	8	Elective: Science	Giorgi Dalakishvili, Iuri Bagatura	Major	Math & Basic Science
4	PHYS196	Basics of Physics II	PHYS195	6	Elective: Science	Giorgi Dalakishvili	Major	Math & Basic Science
4	BIOL100	Biology for Engineers	No Prerequisite	6	Elective: Science	Natalia Kiknadze	Major	Math & Basic Science

Electives

3	CS214	Introduction to Computational Linguistics	CS50, DE112	6	Elective	Irina Lobzhanidze	Major	CS
3	U589	AWS Cloud Practitioner	No Prerequisite	6	Elective	Erekle Magradze	Major	CS
3	U837	Drones	No Prerequisite	6	Elective	Avtandil Mgebrishvili	Major	CS
5	CS314	Distributed and Parallel Computing	CS312	6	Elective	Erekle Magradze	Major	CS
5	CS315	Exploratory Data Analysis	EE300	6	Elective	Gvantsa Mchedlidze	Major	CS
6	CS324	Artificial Neural Networks	EE300	6	Elective	Paata Gogishvili	Major	CS
6	CS327	Computer Vision	EE300	6	Elective	Levan Tsinadze	Major	CS
6	CS326	System Programming	DE111	6	Elective	Amiran Malania	Major	CS
7	CS412	Unix/Linux System Administration	DE101	6	Elective	Erekle Magradze	Major	CS
7	CS415	Introduction to Information Theory	CS321	6	Elective	Erekle Magradze	Major	CS
7	CS417	Introduction to Natural Language Processing	EE300	6	Elective	Irina Lobzhanidze	Major	CS
8	CS421	Mobile Applications Development	DE111	6	Elective	Teimuraz Tutberidze	Major	CS
8	CS425	Message Queueing and Data Streaming	Co-requisite: CS322	6	Elective	Revaz Tatishvili	Major	CS
8	CS426	Big Data Systems	Co-requisite: CS322	6	Elective	Revaz Tatishvili	Major	CS