

Master's Program - Applied Genetics

Course Title	ECTS Credit	Contact Hours	Course Prerequisites	Semester I	Semester II	Semester III	Semester IV	Lecture	Status
Compulsory courses - 42 credits									
Statistics for Biologists	6	44		x				D. Tarkhnishvili	req'd
Effective Scientific Communications: Science Writing (and speaking)	6	48				x		C. Anderson	req'd
Modern Genetics I	6	47		x				C. Anderson	req'd
Modern Genetics II	6	47	Modern Genetics I		x			C. Anderson	req'd
Laboratory Methods in Molecular Genetics	6	62			x			C. Anderson, M. Murtskhvaladze	req'd
Population Biology and Genetics	6	32	Modern Genetics I Statistics for Biologists		x			D. Tarkhnishvili	req'd
Master's seminar	6	38	Modern Genetics II Laboratory Methods in Molecular Genetics			x		D. Tarkhnishvili C. Anderson M. Murtskhvaladze A. Kotorashvili	req'd
Compulsory-elective courses - min. 36 credits									
Living Systems Block (min. 18 credits)									
GMOs and their detection in food	6	41		x		x		N. Datukishvili	comp- elective
Biochemistry of Systems and Metabolomics	6	39				x		L. Shanshiashvili	comp- elective

Cell Physiology	6	32			x			G. Gamkrelidze	comp- elective
Microbial Genetics	6	47				x		A. Kotorashvili	comp- elective
Special Topics in Biotechnology and DNA Manipulation	6	32	Modern Genetics II			x		C. Anderson	comp- elective
Methodological Block (min. 12 credits)									
Analysis of Biological Data	6	44	Statistics for Biologists				x	D.Tarkhnishvili, A. Gavashelishvili, M. Murtskhvaladze, Zh. Ekhvaia	comp- elective
Methods of Evolutionary Research	6	39	Modern Genetics I				x	D. Tarkhnishvili, C. Anderson	comp- elective
Molecular-Genetic Methods in Ecology	6	38	Laboratory Methods in Molecular Genetics				x	M. Murtskhvaladze	comp- elective
Spatial Analysis in Ecology	6	32		x	x	x		A. Gavashelishvili	comp- elective
Next Generation Sequencing	6	47				x		A. Kotorashvili	comp- elective
Introduction to Programming for Bioinformatics	6	48	Statistics for Biologists			x		V. Lagani	comp- elective
Methods for Bioinformatics	6	66	Introduction to Programming for Bioinformatics				x	V. Lagani	comp- elective
Elective courses - max. 12 credits									
Methods of Biodiversity Assessment in the Field	6	64	Effective Scientific Communications: Science Writing (and speaking)				x	D.Tarkhnishvili, Z. Javakhishvili	elective
Nature and Forest Economics	6	38				x		L. Drössler, Francesco Carbone, Nika Gobronidze	elective
Rangeland Ecology, Assessment and Management	6	58				x		M. Gebhardt	elective

Woody Plants of Georgia (Dendrology)	6	40		x		x		M. Mosulishvili	elective
Archaeology and natural sciences	6	32		x		x		M. Elashvili	elective
Modern Management	6	32		x		x		R. Kikava	elective
Qualitative and Quantitative Ethnobotany	6	32						R. Bussmann	elective
Genomic Methods for Developmental Biology (ENG)	6	64			x			Akela A. Kuwahara	elective
Evolutionary Foundations of Medicine	6	32			x			Alexey Kondrashov	elective
Master's Thesis									
Master's Thesis	30						x		req'd