	Name of course	ECTS	Contact hours	Lab/practical work	Prerequisite	semester		Lecturer	Status of course
						Autumn	Spring		
General module - 30 credits									
G675	Academic English Language	6	60				x	Maya Rogava	Oblig
T206	Mathematical Physics	6	48	14		x		Bidzina Kapanadze	Oblig
N335	Maple Computer System Specialized packages	6	62	26		x		Pavle Midodashvili	Oblig
T207	Data Analysis in Physics	6	48	15			x	Nino Chkheidze	Oblig
T208	Classical Hydrodynamics	6	48			x		Goderdzi Didebulidze, Giorgi Dalakishvili,	Oblig
Concentration "Astronomy-Astrophysics "- 90 credits: obligatory - 42 credits, elective -18 credits, Master Thesis -30 credits									
D991	Stars Astronomy	6	48			x		Bidzina Kapanadze, Giorgi Ramishvili,	Oblig
T209	Dynamics of Atmospheric Plasma	6	48	14	Classical Hydrodynamics; Mathematical Physics		x	Teimuraz Zaqarashvili, Bidzina Shergelashvili	Oblig
T210	Astrophysics of Satellites	6	48		Stars Astronomy	x		Vasil Kukhianidze	Oblig
T211	Numerical Methods in Astrophysics	6	48	12	Mathematical Physics; Data Analysis in Physics		x	Bidzina Shergelashvili	Oblig
D256	Star Physics Atmosphere	6	48	14	Classical Hydrodynamics		x	Teimuraz Zaqarashvili, Giorgi Javakhishvili	Oblig
T212	Observational Astronomy	6	71	32			x	Giorgi Javakhishvili, Bidzina Kapanadze	Oblig
T213	Planets and Exoplanets	6	48	14	Stars Astronomy		x	Darejan Japaridze, Teimuraz Zaqarashvili,	Oblig
A719	Solar Physics	6	48	14	Classical Hydrodynamics	x		Teimuraz Zaqarashvili,	Elective
B979	Heliosphere	6	48					Darejan Japaridze	Elective
D254	Outer Galaxy Astronomy	6	48	7			x	Bidzina Kapanadze	Elective
G676	Selested Topics of Astronomy	6	48	10		X	X	Giorgi Ramishvili,, Vasil Kukhianidze	Elective
T214	Astronomial Calculus	6	48			X	X	Giorgi Ramishvili,, Vasil Kukhianidze	Elective
E502	Cosmic Rays Physics	6	48	7		x		Bidzina Kapanadze, Giorgi Didebulidze	Elective
T223	Master Thesis	30			Academic English	x	x		Oblig
Concentration "Cosmology and Gravitation "- 90 credits: obligatory - 30 credits, elective -30 credits, Master Thesis -30 credits									

E596	Early Universe Cosmology	6	63	26		X		Mikheil Maziashvili	Oblig
T215	Computing Physics: Numerical and computer methods in cosmology and gravitation	6	45	23		X		Lado Samushvia	Oblig
A644	Quantum Particles and Fields I	6	63	24		X		Mikheil Maziashvili	Oblig
G678	Physical Cosmology I	6	64				X	Tinatin Kakhniashvili, Lado Samushvia	Oblig
T216	Master's Seminar (for the field of Cosmology and Gravitation)	6	49		Quantum Particles and Fields I, Physical Cosmology I	X		Tinatin Kakhniashvili, Lado Samushvia, Mikheil Maziashvili	Oblig
N445	Physical Cosmology II	6	64		Physical Cosmology I	X		Tinatin Kakhniashvili, Lado Samushvia	Elective
B595	Quantum Particles and Fields II	6	63	26	Quantum Particles and Fields I		X	Mikheil Maziashvili	Elective
T217	Physics of Gravitation Waves	6	64		Quantum Particles and Fields I, Physical Cosmology I		X	Tinatin Kakhniashvili	Elective
C280	Elementary Particles Theory I – Standard Model	6	60	24	General and Special Relativity Theory I, Quantum Particles and Fields I, The Main Principles of Particles and Fields		X	Zurab Tavartkiladze	Elective
V741	The Main Principles of Particles and Fields	6	60	24		X		Zurab Tavartkiladze	Elective
A643	General and Special Relativity Theory I	6	59	18		X		Juansher Chkareuli, Zurab Kepuladze, Juansher Jejelava	Elective
G729	General and Special Relativity Theory II	6	59	18	General and Special Relativity Theory I		X	Juansher Chkareuli, Zurab Kepuladze, Juansher Jejelava	Elective
D265	Relativistic Astrophysics	6	34	13	Theoretical Astrophysics	X		Andria Rogava, Giorgi Machabeli	Elective
D264	Theoretical Astrophysics	6	32	12		X		Giorgi Machabeli, Andria Rogava	Elective
D263	Selected Topics of Theoretical Physics	6	32	13			X	Nino Chkeidze	Elective
D254	Outer Galaxy Astronomy	6	48	7			X	Bidzina Kapanadze	Elective
T256	Master Thesis	30			Master Seminar; Academic English	x	x		Oblig
Concentration "Elementary Particle Physics "- 90 credits: obligatory - 42 credits, elective -18 credits, Master Thesis -30 credits									
A644	General and Special Relativity Theory I	6	59	18		X		Juansher Chkareuli, Zurab Kepuladze, Juansher Jejelava	Oblig
V741	The Main Principles of Particles and Fields	6	60	24		X		Zurab Tavartkiladze	Oblig
A644	Quantum Particles and Fields I	6	63	24		X		Mikheil Maziashvili	Oblig

G729	General and Special Relativity Theory II	6	59	18	General and Special Relativity Theory I		X	Juansher Chkareuli, Zurab Kepuladze, Juansher Jejelava	Oblig
B595	Quantum Particles and Fields II	6	63	26	Quantum Particles and Fields I		X	Mikheil Maziashvili	Oblig
C280	Elementary Particles Theory I – Standard Model	6	60	24	General and Special Relativity Theory I, Quantum Particles and Fields I , The Main Principles of Particles and Fields		X	Zurab Tavartkiladze	Oblig
E596	Early Universe Cosmology	6	63	26		X		Mikheil Maziashvili	Oblig
D262	Elementary Particles Theory II – Applications of Standard Model	6	45	15	Quantum Particles and Fields II ; Elementary Particles Theory I – Theoretical Basics of Standard Model	X		Zurab Tavartkiladze	Oblig
D192	Group Theory and Geometrical Structures	6	47	13		x		Giorgi Rakviashvili	Elective
B579	Method of Potentials in Mathematical Physics	6	48				x	Merab Svanadze	Elective
	Theoretical Astrophysics	6	32	12		x		Giorgi Machabeli, Andria Rogava	Elective
D689	Selected Topics of Theoretical Physics	6	32	13			X	Nino Chkeidze	Elective
D263	Radiation processes in Astrophysics	6	47	15	Theoretical Astrophysics			Nino Chkheidze, Giorgi Machabeli	Elective
T217	Physics of Gravitation Waves	6	64		Physical Cosmology I, Quantum Particles and Fields I		x	Tinatin Kakhniashvili	Elective
P413	Advanced Quantum Mechanics	6	48	13		x		Aleksandre Nersesiani	Elective
P411	Condensed Matter Physics I	6	48	12		x		Giorgi Japaridze	Elective
P414	Advanced Statistical Physics	6	48	13			x	Aleksandre Nersesiani	Elective
N333	Topological aspects of Condensed Matter Physics and Quantum Field Theory	6	48	12			x	Aleksandre Nersesiani	Elective
D256	Star Physics Atmosphere	6	48	14	Classical Hydrodynamics		x	Teimuraz Zaqarashvili, Giorgi Javakhishvili	Elective
T223	Master Thesis	30			Academic English	x	x		Oblig
Concentration "Theoretical Astrophysics "- 90 credits: obligatory - 30 credits, elective -30 credits, Master Thesis -30 credits									
D264	Theoretical Astrophysics	6	32	12		X		Giorgi Machabeli, Andria Rogava	Oblig
D265	Relativistic Astrophysics	6	34	13	Theoretical Astrophysics		X	Andria Rogava,Giorgi Machabeli	Oblig
D263	Selected Topics of Theoretical Physics	6	32	13			X	Nino Chkheidze	Oblig
T218	Analysis of High-Frequency Data	6	48	15	Data Analysis in Physics	X		Nino Chkheidze	Oblig
D689	Radiation processes in Astrophysics	6	47	15		X		Nino Chkheidze, Giorgi Machabeli	Oblig
N446	Introduction to Astrophysics of Compact Objects	6	34	15	Relavistic Physics	X		Andria Rogava	Elective
A643	General and Special Relativity Theory I	6	59	18		X		Juansher Chkareuli, Zurab Kepuladze, Juansher Jejelava	Elective

C280	Elementary Particles Theory I – Standard Model	6	60	24	General and Special Relativity Theory I, Quantum Particles and Fields I , The Main Principles of Particles and Fields		X	Zurab Tavartkiladze	Elective
V741	The Main Principles of Particles and Fields	6	60	24		X		Zurab Tavartkiladze	Elective
P413	Advanced Quantum Mechanics	6	48	13		X		Aleksandre Nersesiani	Elective
P414	Advanced Statistical Physics	6	48	13			X	Aleksandre Nersesiani	Elective
P411	Physics of Condensed Environment 1	6	48	12		X		Giorgi Japaridze	Elective
G678	Physical Cosmology I	6	64				X	Tinatin Kakhniashvili	Elective
E596	Early Universe Cosmology	6	63	26		X		Mikheil Maziashvili	Elective
D256	Star Physics Atmosphere	6	48	14	Classical Hydrodynamics		x	Teimuraz Zaqarashvili, Giorgi Javakhishvili	Elective
A715	Atmospheric Physics	6	63	40		x		Goderdzi Didebulidze	Elective
T223	Master Thesis	30			Academic English	x	x		Oblig
Concentration "Condensed Matter Physics "- 90 credits: obligatory - 30 credits, elective -30 credits, Master Thesis -30 credits									
P411	Condensed Matter Physics I	6	48	12		X		Giorgi Japaridze	Oblig
P413	Advanced Quantum Mechanics	6	48	13		X		Aleksandre Nersesiani	Oblig
P412	Condensed Matter Physics II	6	48	12	Physics of Condensed Environment 1		X	Giorgi Japaridze	Oblig
P414	Advanced Statistical Physics	6	48	13	Advanced Quantum Mechanics		X	Aleksandre Nersesiani	Oblig
B956	Theory of Phase Transition	6	48	12		X		Aleksandre Nersesiani	Oblig
P410	Superconductivity	6	48	12		X		Giorgi Japaridze	Elective
N333	Topological aspects of Condensed Matter Physics and Quantum Field Theory	6	48	12			X	Aleksandre Nersesiani	Elective
D264	Theoretical Astrophysics	6	32	12		X		Giorgi Machabeli, Andria Ro	Elective
D263	Selected Topics of Theoretical Physics	6	32	13			X	Nino Chkheidze	Elective
G678	Physical Cosmology I	6	64				X	Tinatin Kakhniashvili, Lado Samushvia	Elective
D191	Elements of Sets Theory	6	63	26		X		Giorgi Rakviashvili	Elective
E374	Linear Ordinary Differential Equations	6	32	13		X		Giorgi Berekelashvili	Elective
D587	Topological Methods of Nonlinear Analysis	6	47				X	Giorgi Khimshiashvili	Elective
D597	Nonlinear Ordinary Differential Equations	6	32	13			X	Sulkhan Mukhigulashvili	Elective
T223	Master Thesis	30			Academic English	x	x		Oblig
Concentration "Biophysics "- 90 credits: obligatory - 42 credits, elective -18 credits, Master Thesis -30 credits									
A612	Molecular Biophysics	6	32			x		Tea Tarielashvili	Oblig

B576	Cell Biophysics	6	32		Molecular Biophysics		x	Nunu Metreveli	Oblig
B575	Research Methods in Biophysics 1	6	48	28		x		Irine Khutsishvili, Nunu Metreveli	Oblig
A619	Research Methods in Biophysics 2	6	48	28	Research Methods in Biophysics 1		x	Irine Khutsishvili, Nunu Metreveli	Oblig
A609	Medical Biophysics	6	32			x		Besik Kankia, Nunu Metreveli	Oblig
A614	Applied Biophysics	6	32		Molecular Biophysics		x	Irine Khutsishvili, Nunu Metreveli	Oblig
A872	Favorite Chapters of Molecular Biology	6	66					Revaz Solomonia, Ekaterine Tevdoradze	Elective
D199	Biochemistry of Systems and Metabolomics	6	39	6		x		David Mikeladze, Lali Shanshiashvili	Oblig
D205	Nanoscience: Principles of Nanobiology and Nanomedicine	6	34	10				Mzia Zhvania	Elective
B988	Biotechnological Approaches	6	32					Neli Datukishvili	Elective
P413	Advanced Quantum Mechanics	6	48	13			x	Aleksandre Nersesiani	Elective
P414	Advanced Statistical Physics	6	48	13	Advanced Quantum Mechanics		x	Aleksandre Nersesiani	Elective
N871	Cell Physiology	6	32				x	Giga Gamkrelidze	Elective
P411	Condensed Matter Physics I	6	48	12				Giorgi Japaridze	Elective
T223	Master Thesis	30			Academic English	x	x		Oblig
Concentration "Atmosphere and Ionosphere Physics "- 90 credits: obligatory - 30 credits, elective -30 credits, Master Thesis -30 credits									
A715	Atmospheric Physics	6	63	40		x		Goderdzi Didebulidze	Oblig
D690	Ionospheric physics	6	63	40			x	Goderdzi Didebulidze	Oblig
T219	Instruments and Methoda of Earth Remote Research	6	63	39			x	Maya Todua	Oblig
D977	Plasma Physics	6	47	15	Classical Hydrodynamics; Mathematical Physics	x		Ivane Murusidze	Oblig
T220	Application of Atmospheric Models	6	62	30			x	Giorgi Dalakishvili	Oblig
A716	Atmosphere Luminescence	6	48	12			x	Maya Todua, Giorgi Javakhishvili	Elective
T221	Atmospheric Chemistry	6	33	3		x		Ketevan Kupatadze	Elective
E502	Cosmic Rays Physics	6	48	7		x		Bidzina Kapanadze, Goderdzi Didebulidze	Elective
A719	Solar Physics	6	48	14	Classical Hydrodynamics	x		Teimuraz Zaqarashvili	Elective
T222	Physics of The Sun - The Earth Connections	6	64	40	Classical Hydrodynamics		x	Goderdzi Didebulidze, Maya Todua	Elective

A637	Models of Applied Mathematics	6	39			x		Merab Svanadze	Elective
T223	Master Thesis	30			Academic English	x	x		Oblig