

YEAR I – semesters 1 and 2

Courses	Code	Semester 1					Semester 2				
		hours/semester			Exam	EC TS	hours/semester			Exam	EC TS
		L	C	Lab			L	C	Lab		
Algebra and Geometry	AzG	30	15		E	5					
Mathematical Analysis 1	AMat1	45	60		E	9					
Analysis of Experimental Data	ODD	15		15		3					
Fundamentals of Physics 1	PFiz1	45	30		E	7					
Fundamentals of Information Technology	PTI			30		4					
Social or Humanistic Subject	HES1	30				2					
Mathematical Analysis 2	AMat2						45	60		E	9
Foreign Language	JO							60			4
Physics Laboratory 1	LFiz1								30		4
Fundamentals of Physics 2	PFiz2						60	60		E	9
Basics of Programming	PProg						30		30		4
Total		165	105	45	3	30	135	180	60	2	30

YEAR II – semesters 3 and 4

Courses	Code	Semester 3					Semester 4				
		hours/semester			Exam	EC TS	hours/semester			Exam	EC TS
		L	C	Lab			L	C	Lab		
Mathematical Analysis 3	AMat3	30	30		E	6					
Chemistry	Chem	30		30		5					
Foreign Language	JO		60			4		60			4
Programming Languages	JProg	30		30		4					
Mechanics	Mech	30	30		E	6					
Fundamentals of Electronics	PEle	30	15	30		5					
Electrodynamics	Eldy						30	30		E	5
Electronics in Physical Experiment	ELEF						15		30		4
Quantum Physics	FKwant						45	30		E	6
Mathematical Methods of Physics	MMF						30	30		E	5
Probability	Probab						15	15			2
Object-Oriented Programming	PrObie						15		30		4
Physical Education and Sports	WF		30			0		30			0
Total		150	165	90	2	30	150	195	60	3	30

YEAR III – semester 5

Courses	Code	Semester 5				
		hours/semester			Exam	EC TS
		L	C	Lab		
Statistical Physics and Thermodynamics	FSiT	30	30		E	5
Engineering Graphics	Grafl			30		3
Physics Laboratory 2	LFiz2			45		4
Fundamentals of Optics	POpt	30	15		E	4
Fundamentals of Virtual Devices Design	PPPW	15		45		4
Introduction to Solid State Physics	WFCS	30	15		E	4
Introduction to Nuclear Physics	WFJ	30	15		E	4
Social or Humanistic Subject	HES2	30				2
Physical Education and Sports	WF		30			0
Total		165	105	120	4	30

After semester 5 – choice of specialisations.

Specialisation: **Computer Physics**

Courses	Code	Semester 6					Semester 7				
		hours/semester			Exam	EC TS	hours/semester			Exam	EC TS
		L	C	Lab			L	C	Lab		
Dynamics of Nonlinear Systems	DUN	30			E	3					
Computer-Aided Analysis of Experimental Data	KADD	15		30		3					
Pre-Diploma Laboratory	LPdypl			15		3					
Specialistic Laboratory	LSpec			30		3					
Laboratory of Nuclear Techniques	LTJ			45		4					
Numerical Methods	MNum	30		15		3					
Fundamentals of Microprocessor Systems	PSM	15		45		4					
Computer Networks	SKom	8		22		2					
Neural Networks	SNeur	30			E	3					
Technological Entrepreneurship ^{*)}	PrzT	15	15			2					
Computer-Aided Simulation Methods	KMS						30		30		4
Computer-Aided Measurements Systems	KSP						15		30		3
Elective Subject	POb						30				2
Facultative Subjects	PSpec						60				4
Diploma Seminar	SDypl							30			2
Bachelor of Science Thesis	PDypl								90	E	15
Total		143	15	202	2	30	135	30	150	1	30

Facultative Subjects to be selected from:

Nuclear Methods and Techniques	MTJ						30	15			3
Dosimetry	Doz						30		15		3
Introduction to Physics of Complex Systems	WFUZ						30				2
Genetic Algorithms	AIGen						30				2

^{*)} Obligatory course belonging to social, humanistic or economic field.

After semester 6 – obligatory professional training – 4 weeks, 6 ECTS over limit.

Specialisation: **Medical Physics**

Courses	Code	Semester 6					Semester 7				
		hours/semester			Exam	EC TS	hours/semester			Exam	EC TS
		L	C	Lab			L	C	Lab		
Signal Analysis in Time and Frequency Domain	ASDCS	15		15		3					
Anatomy and Physiology	AnFizj	30	15		E	3					
Dynamics of Nonlinear Systems	DUN	30			E	3					
Pre-Diploma Laboratory	LPdypl			15		3					
Laboratory of Nuclear Techniques	LTJ			45		4					
Numerical Methods	MNum	30		15		3					
Computer Networks	SKom	8		22		2					
Neural Networks	SNeur	30			E	3					
Technological Entrepreneurship ^{*)}	PrzT	15	15			2					
Introduction to Medical Science	WNM	30	15			4					
Dosimetry	Doz						30		15		3
Fundamentals of Imaging Technique in Medicine	PTOM						30		30		5
Facultative Subject	PSpec						30	15			3
Introduction to Medical Physics	WFM						30				2
Diploma Seminar	SDypl							30			2
Bachelor of Science Thesis	PDypl								90		15
Total		188	45	112	2	30	120	45	135	Dypl	30

Facultative Subjects to be selected from:

Nuclear Methods and Techniques	MTJ						30	15			3
Visual and Physiological Optics	OFW						30	15			3

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After semester 6 – obligatory professional training – 4 weeks, 6 ECTS over limit.

Specialisation: **Materials and Nanostructures**

Courses	Code	Semester 6					Semester 7				
		hours/semester			Exam	EC TS	hours/semester			Exam	EC TS
		L	C	Lab			L	C	Lab		
Physics of Semiconductors	FPp	30			E	3					
Physics of Ionic Processes in Solids	FPJCS	30			E	3					
Computer-Aided Analysis of Experimental Data	KADD	15		30		3					
Pre-Diploma Laboratory	LPdypl			15		3					
Specialistic Laboratory	LSpec			30		3					
Numerical Methods	MNum	30		15		3					
Nanostructures	Nans	30				2					
Fundamentals of Microprocessor Systems	PSM	15		45	E	4					
Technological Entrepreneurship ^{*)}	PrzT	15	15			2					
Computer Networks	SKom	8		22		2					
Structural and Thermal Methods for Materials Characterisation	STMBM	12		18		2					
Computer-Aided Simulation Methods	KMS						30		30		4
Spectroscopic and Electrical Techniques for Materials Investigations	SEMBM						15		30		3
Technology and Characterization of Low Dimensional Systems	TCUN						30		15		4
Diploma Seminar	SDypl							30			2
Elective Subject	POb						30				2
Bachelor of Science Thesis	PDypl								90		15
Total		185	15	175	3	30	105	30	165	Dypl	30

^{*)} Obligatory course belonging to social, humanistic or economic field.

After semester 6 – obligatory professional training – 4 weeks, 6 ECTS over limit.

Specialisation: **Optoelectronics**

Courses	Code	Semester 6					Semester 7				
		hours/semester			Exam	EC TS	hours/semester			Exam	EC TS
		L	C	Lab			L	C	Lab		
Physics of Lasers	FLas	30			E	3					
Computer-Aided Analysis of Experimental Data	KADD	15		30		3					
Specialistic Laboratory	LSpec			30		3					
Pre-Diploma Laboratory	LPdypl			15		3					
Numerical Methods	MNum	30		15		3					
Fourier's Optics	OptFou	30	15		E	4					
Fundamentals of Microprocessor Systems	PSM	15		45		4					
Technological Entrepreneurship ^{*)}	PrzT	15	15			2					
Computer Networks	SKom	8		22		2					
Optoelectronic Systems	UOe	30			E	3					
Laboratory of Wave Optics	LOF								60		4
Optoelectronic Systems – Laboratory	LUOe								60		5
Elective Subjects	POb						60				4
Diploma Seminar	SDypl							30			2
Bachelor of Science Thesis	PDypl								90		15
Total		173	30	157	3	30	60	30	210	Dypl	30

^{*)} Obligatory course belonging to social, humanistic or economic field.

After semester 6 – obligatory professional training – 4 weeks, 6 ECTS over limit.