

VILNIUS UNIVERSITY
FACULTY OF PHYSICS

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Contact person : Prof. L.Kimtys

Nuclear Energy physics (BSc study program)

Identification code [61202P118]

Duration 4 years

240 ECTS

Qualification: **BSc in Physics**

Subject (I term)	ECT	Contact hours
Mathematics I/II	7.5	96
Introduction to nuclear energy	4.5	48
Safety at the workplace	3	32
Application of computers	3	48
Introduction to programing	4.5	48
Introduction to sociology	3	32
Foreign language I/II.	4.5	64

Subject (II term)	ECTS	Contact hours
Mathematics II/II	6	80
Fundamentals of energy generation	3	48
Computer graphics	3	48
Mechanics and Thermodynamics	7.5	112
Probability theory	3	48
Foreign language II/II	4.5	64
Free to choose	3	32

Subject (III term)	ECTS	Contact hours
Astrophysics	4.5	64
Data base	3	32
Electricity and magnetismus	7.5	112
Differential equations in physics	4.5	64
Introduction to psychology	3	48
Radiation ecology	3	48
Radiation protection	4.5	48

Subject (IV term)	ECTS	Contact hours
Physics of nuclear materials	6	64
Computer networks	4.5	64
Optics and atom physics	7.5	112

Terminology	3	48
Fundamentals of theoretical mechanics	3	48
Thermohydraulic	6	64

Subject (V term)	ECTS	Contact hours
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Physics of nucleus	7.5	96
Electrodynamics	4.5	64
Fundamentals of quantum mechanics	4.5	48
Neutron and nuclear reactor physics I/II	6	64
Nuclear fuel cycle	4.5	48
Radioactive waste	4.5	48
Free to choose	3	32

Subject (VI term)	ECTS	Contact hours
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Experimental nuclear physics	4.5	64
Solid state physics	6	80
Neutron and nuclear reactor physics	4.5	64
Fundamentals of statistical physics	4.5	48
Fundamentals of law	4.5	48
Nuclear electronic	3	48
New reactor systems	3	48
Free to choose	3	32

Subject (VII term)	ECTS	Contact hours
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Introduction to philosophy	3	48
Professional training	15	400
Radiation chemistry	4.5	64
Radionuclides in the environment	3	48
Interaction of radiation with matter	3	48
Microprocessor technologies	4.5	64
Management systems	4.5	64

Subject (VIII term)	ECTS	Contact hours
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Project management	4.5	64
Applied nuclear spectroscopy	4.5	64
Environmental safety and decontamination	4.5	64
Personell management	4.5	64
Free to choose	4.5	48
BSc thesis	12	320

Program
committee

**prof. Liudvikas Kimtys, prof. Vidmantas Remeikis, dr. Laurynas Juodis, dr.
Gintautas Klevinskas, Fizikos fakulteto studentų atstovas**