

## Highly-Critical Cybernetic Systems Development Technologies (Master)

<b>Higher Education Institution</b>	NRNU Mocsow Engineering Physics Institute	
<b>Country</b>	Russian Federation	
<b>City</b>	Moscow	
<b>Web-site</b>	<a href="https://mephi.ru">https://mephi.ru</a>	
<b>Name of the Programme</b>	Highly-Critical Cybernetic Systems Development Technologies	
<b>Degree awarded</b>	Master	
<b>Qualification Level</b> (first/ second cycle)	Second cycle	
<b>Programme objectives; Profile</b>	Highly-qualified bachelor training, with special background in the field of cybernetic system development technologies, with the main intension of supplying staff to organizations in high-tech fields of Russian science and industry.	
<b>Programme Duration</b>	2 years	
<b>Total number of ECTS Credits awarded</b>	120	
<b>Curriculum analysis</b> (% and credits):	%	Cr ECTS
– engineering fundamentals and advanced engineering subjects (including final thesis)	60,8	73
– humanities and socioeconomics studies	10,8	13
– mathematics / natural sciences fundamentals	22,5	27
– other	5,8	7
<b>Brief description of the programme</b>	The professional line includes design and implementation, as well as maintenance, of information systems and software products in the field of applied mathematics and computer science for state, industrial and commercial organizations:	

- organizations of the State Atomic Energy Corporation “Rosatom”
- computing centers and data centers;
- scientific-industrial corporations;
- high-school education centers

Graduates earn the following abilities:

- introducing new information technologies to the organization infrastructure;
- developing software tools for systems for ERP software quality management systems;
- business consulting and engineering.
- a software project (software development)
- software (software created)
- processes of life cycle of the software
- methods and tools for software development
- personnel involved in the software life cycle

Along with all disciplines required by the federal standards, students are additionally trained in various fields of discrete mathematics, database systems and technologies, AI systems and technologies, various cybernetic systems development technologies, models of physical processes in nuclear systems. Student participation in research activities, with qualifying works being made and presented, is mandatory.

Practical work:

- Mandatory summer probation.
- Mandatory practical training (also at summer).

Degree work probation.