

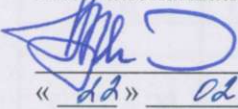
IV. Internship				V. Research			VI. Final Certification
Internship Title	Semester	Weeks	Credits	Semester	Weeks	Credits	Master's Thesis
Research	4	4	6	4	8	12	

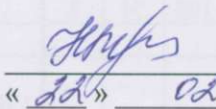
VII. Competence Matrix


Competence Code	Competence	Module Code, Discipline Code
UC-1	Abilities to use the scientific cognition techniques (analysis, comparison, systematization, abstracting, modeling, data verification, decision-making, etc.) in independent research activities, to generate and to realize innovative ideas	1.3.1
UC-2	Abilities to apply management techniques in classical management problems, including solving non-standard problems	1.1.2
UC-3	Abilities to apply the results of research and development work to implement innovative projects	1.3.2
UC-4	Ability to realize pedagogical activities in educational institutions; to master and introduce the effective educational and information communication technologies, pedagogical innovations	3.1
UC-5	Mastering scientific cognition methods; ability to analyze the content and level of philosophical-methodological problems when accomplishing the tasks of research and innovative activities	4.1
UC-6	Mastering of foreign languages for communication in interdisciplinary and research fields, in different forms of international collaboration, research and innovative activities	4.2
UC-7	Skills to use advanced information technologies for solving of research and innovative problems	4.3
DPC-1	Abilities to conduct an audit of the security of information systems, based on the results of monitoring intelligently to make decisions on performing changes to the information security system	1.1.1
DPC-2	Abilities to develop databases for solving applied problems in the field of information security	1.2.1
DPC-3	Ability to install and configure specially dedicated operating systems in accordance with security requirements	1.2.2
DPC-4	Developing network applications for solving applied problems in the field of information security	1.2.3
SC-1	Mastering the methods of designing telecommunication systems, analyzing networks and information transmission systems	2.1.1
SC-2	Mastering the design methods of data transmission networks connecting various sensors, executive mechanisms and industrial controllers	2.1.2
SC-3	Mastering methods of analysis, design and deployment of wireless networks and services	2.1.2
SC-4	Mastering data mining methods for solving scientific and applied problems	2.2
SC-5	Mastering the design methods of information security systems and methods for assessing the sensivity of information transmission, storage and processing systems, be able to assess the effectiveness of information security	2.3.1
SC-6	Mastering the methods of development and application of technical tools and systems to secure information and ensure electromagnetic compatibility of radioelectronic systems	2.3.2
SC-7	Applying modern CAD technologies to design intelligent information and measurement systems	2.3.3
SC-8	Abilities to develop requirements for information systems, including information security and information protection systems	2.4.1
SC-9	Mastering the methods of providing the systems of the Internet of Things; abilities to develop information security systems for devices and networks of the Internet of Things	2.4.1
SC-10	Mastering methods of applied steganography for establishing secure data transmission via open channels	2.4.2
SC-11	Mastering the methods of constructing and analyzing systems and tools for ensuring the security of information using deterministic chaos in modern telecommunication networks	2.4.2
SC-12	Skills to building mutually beneficial commercial relations in the implementation of the research activity results in the field of production and services	2.5.1
SC-13	Knowledge on the legal and organizational foundations of the state innovation policy and innovation activity in the Republic of Belarus; abilities to apply legal knowledge to organize and carry out innovative activities	2.5.2
SC-14	Skills to organizing innovative activities, assessing innovative and technological risks when creating and promoting new projects	2.5.3
SC-15	Programming skills in a high-level language for solving applied and research problems in the design of radioelectronic systems	2.6.1
SC-16	Mastering methods of building and managing computing systems, scaling techniques, load balancing and information flows, deployment strategies and dynamic scaling	2.6.1
SC-17	Possessing the principles of object-oriented decomposition of complex systems	2.6.2
SC-18	Mastering technologies for creating, configuring and securing isolated virtual hosts and containers in a cloud environment	2.6.2

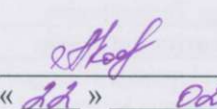
It is developed on the basis of the curriculum for specialty 1-98 80 01 Information Security, approved on 22.02.2022 (Registration number P 98-178/уч.)

¹ General educational disciplines «Philosophy and Methodology of Science», «Foreign Language», «Information Technologies: Basics» are studied at the choice of a master's student. The study of general education disciplines «Philosophy and Methodology of Science», «Foreign Language» ends by the passing of the candidate exam, the general education discipline «Information Technologies: Basics» – the candidate end-of-term test.

Vice-Rector
for Academic Affairs and
Internationalization of Education

« 22 » 02 2022

Academic Affairs Department
Head

« 22 » 02 2022

Dean of the Faculty of Radiophysics
and Computer Technologies

« 22 » 02 2022

Expert norm controller

« 22 » 02 2022

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Научно-методическим советом БГУ
Протокол от 06.01.2022 № 3.