Syllabus Form of Academic Discipline

№	Field name	Detailed content, comments
1.	Name of the faculty	Post-Graduate Studies Department
2.	The level of higher education	Ph.D
3.	Code and title of specialty	172 – Telecommunications and Radio Engineering
4.	The type and title of the educational program	Educational Program of Telecommunications and Radio Engineering
5.	Code and title of the discipline	_____ Methods of increasing the noise immunity of airspace surveillance systems
6.	Number of ECTS credits	8
7.	The structure of the course (distribution by type and hours of training)	8 ECTS credits: 60 h. – 30 lecture, 40 h. – 20 practice works, 14 h. – 7 consultations, 126 h. – independent work, type of control: test.
8.	Schedule (terms) of study of the subject	1 Course, 1 and 2 semesters of study
9.	Prerequisites for learning the discipline	Study of disciplines in the field 17 "Electronics and telecommunications"
10.	Abstract (content) of the discipline	Elective academic discipline of professional and practical training, contains the following content modules: The place and role of interrogative airspace surveillance systems in the information support of users. Signals of interrogatory airspace surveillance systems and their processing. Theory of detection and coordinate measurement of air objects by observation surveillance systems. Interference protection of interrogative airspace surveillance systems. Ways and methods to increase the noise immunity of interrogative airspace surveillance systems.
11.	Competencies, knowledge, skills, understanding that a higher education acquirer has in the learning process	ФК6. Ability to search, systematically study and analyze scientific and technical information, world experience related to the use of telecommunications and radio engineering to study various processes, phenomena and systems.
12.	Learning outcomes of a Higher Education applicant	ПРН5. Knowledge acquisition and understanding of basic methods for data analysis and ability to apply tools and models of data analysis (hardware and software resources, application packages, online resources and related technologies) in the study of real systems and presentation of research results in various forms; implementation of scientific and pedagogical activities using these resources and technologies.
13.	Assessment system in accordance with each task for taking tests/exams	To obtain a positive assessment of the graduate student must master the following thematic sections: classification of airspace surveillance systems; structure and quality indicators of information support of consumers by airspace surveillance systems; general information and field of application of interrogation surveillance systems; signals of interrogative airspace surveillance systems; detection of signals in interrogation surveillance systems; noise immunity for signals of interrogation surveillance systems; signal processing in

		interrogation monitoring systems; general approaches to detection and measurement of coordinates of air objects; mathematical models of signals and interferences in interrogation monitoring systems; optimization of signal detection in interrogation monitoring systems; assessment of noise immunity of interrogative airspace surveillance systems; assessment of interference immunity of interrogation surveillance systems in the transmission of flight information; assessment of noise immunity of information codes used for the transmission of flight information in interrogation surveillance systems; increasing the energy concealment of the respondents of interrogation surveillance systems; methods of protection of interrogative surveillance systems from internal system interference The credit is assessed by a rating, which is defined as the number of points obtained by the graduate student during the semester on a 100-point scale.
14.	The quality of the educational process	Adherence to the principles of academic integrity (http://lib.nure.ua/plagiat). Update of the work program of the discipline - 2020. The laboratory workshop uses modern software MatLab, Octava, Mathcad.
15.	Methodological support	Complex of educational and methodical support of educational discipline «Methods for improving noise immunity of airspace surveillance systems» for students of all forms of specialties 172 – «Telecommunications and radio engineering» / [Electronic resource] Authors.: I. Obod, I. Svyd. – Kharkiv, 2020. http://catalogue.nure.ua/knmz.
16.	The developer of the Syllabus	Obod Ivan, Professor the Department of Microprocessor Technologies and Systems, Doctor of Technical Sciences, Professor ivan.obod@nure.ua Svyd Iryna, Head of Department of MTS, Candidate of Technical Sciences, Associate Professor iryna.svyd@nure.ua