Syllabus Form of Academic Discipline
Data processing of radar systems for airspace surveillance

№	Field name	Detailed content, comments
1.	Name of the faculty	Post-Graduate Studies Department
2.	The level of higher education	Ph.D
3.	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.	Title of the discipline	Data processing of radar systems for airspace surveillance
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 data processing of airspace surveillance radar systems. Radar data of interrogation systems of airspace surveillance and their processing. Basics of the statistical theory of signal detection of airspace surveillance systems; signal resolution of airspace surveillance systems; evaluation of signal parameters of airspace surveillance systems. Information network of 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: characteristics of airspace surveillance systems; signals and noise in airspace surveillance systems; basics of statistical theory of signal detection of airspace surveillance systems; basics of statistical theory of signal resolution of airspace surveillance systems; the basics of the statistical theory of evaluating parameters of signals of airspace surveillance systems; information network of airspace surveillance systems; data processing of airspace surveillance systems. 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, https://nure.ua/branch/akademichna-dobrochesnist-ta-zabezpechennja-jakosti-osviti. Update of the work program of the discipline - 2022. The laboratory workshop uses modern software MatLab, Octava, Mathcad.
15.	Methodological support	Complex of educational and methodical support of educational discipline « Data processing of radar systems for airspace surveillance» for students of all forms of specialties 172 – «Telecommunications and radio engineering» / [Electronic resource] Authors.: I. Obod, I. Svyd. – Kharkiv, 2022, – 90 p.
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