



## PEDAGOGICAL PRACTICE

### Working program of the academic discipline (Syllabus)

<b>Level of higher education</b>	<i>Третій (освітньо-науковий)</i>
<b>Branch of knowledge</b>	<i>17 Electronics and telecommunications</i>
<b>Specialty</b>	<i>172 Telecommunications and radio engineering</i>
<b>Educational program</b>	<i>EP Telecommunications and radio engineering</i>
<b>Discipline status</b>	<i>Normative</i>
<b>Form of education</b>	<i>intramural (day) remote/mixed</i>
<b>Year of training, semester</b>	<i>2nd year, autumn semester</i>
<b>Scope of the discipline</b>	<i>2 credits – 60 hours</i>
<b>Semester control/ control measures</b>	<i>Test</i>
<b>Lessons schedule</b>	<i>Practice lasts 2 weeks and can be carried out throughout the semester</i>
<b>Language of teaching</b>	<i>Ukrainian</i>
<b>Information about the course leader / teachers</b>	<i>Head of practice: candidate of technical sciences, associate professor, associate professor of the TC Oleg Tsukanov +38095-012-79-61, <a href="mailto:cukanov-o@ukr.net">cukanov-o@ukr.net</a></i>
<b>Placement of the course</b>	<i><a href="https://classroom.google.com/c/MzE2MjUzMjQ0MjA2?cjc=dpwbqjk">https://classroom.google.com/c/MzE2MjUzMjQ0MjA2?cjc=dpwbqjk</a></i>

#### Details of the academic discipline

#### Program of educational discipline

##### **1. Description of the educational discipline, its purpose, subject of study and learning outcomes**

*Pedagogical practice is a mandatory component of the educational and scientific program for the preparation of doctors of philosophy and is aimed at acquiring the necessary pedagogical competences by the graduate student. The program of pedagogical practice of graduate students highlights the organizational and methodological principles of practical professional training of graduate students.*

*The goal of pedagogical practice is the formation of the third (educational and scientific) level of higher education in pedagogical competences necessary for teaching work in the field of micro- and nanosystem technology in institutions of higher education; deepening and consolidating the knowledge of graduate students on issues of organization and forms of implementation of the educational process in modern conditions, its scientific, educational-methodical and regulatory support; formation of skills in the processing of scientific and informational sources during the preparation of classes; application of active methods of teaching educational disciplines in the relevant field. Educational component H8 "Pedagogical practice" belongs to the mandatory (normative) component of EP.*

The discipline forms **general competences regarding** the ability to contribute to technological, social or cultural progress in academic and professional contexts (GC7), as well **as professional competences**:

**program learning outcomes:**

- *methods of scientific research in the subject area (GC2).*
- *develop and conduct all types of classes in institutions of higher or professional education, including with a combination of training at the workplaces of enterprises, institutions and organizations (use of dual education technology) (SK9).*
- *to create a full-fledged methodical and didactic support for educational disciplines of professional and basic training of specialists of all levels of higher education, to adapt the available material in accordance with scientific and technical progress, teaching features, existing norms and standards (SK10).*

## **2. Pre-requisites and post-requisites of the discipline (place in the structural and logical scheme of training according to the relevant educational program)**

*Pedagogical practice is based on the knowledge acquired by graduate students in basic professional disciplines and disciplines related to higher education pedagogy. Pedagogical practice is the foundation for the formation of skills, abilities and teaching skills in a higher educational institution. Practice makes it possible to form graduate students' understanding of the key principles of preparing and conducting various types of classes. Graduate students learn to independently prepare the necessary materials for the organization and conduct of lectures, seminars, practical and laboratory classes in various specialized disciplines.*

## **3. Content of the academic discipline**

*Pedagogical practice consists of the following stages:*

- *receiving an individual assignment and practice schedule, familiarization with the practice program;*
- *training on practical training, training on safety techniques;*
- *familiarization with the main normative documents regulating the organization and conduct of the educational process of the department;*
- *detailed study of the material and technical base of practice;*
- *familiarization with the material and technical equipment of laboratories and classrooms where classes are held;*
- *attending lecture, practical or laboratory classes in specialized disciplines conducted by highly qualified teachers of the department;*
- *independent preparation and conduct of classroom classes on specified profile disciplines, which are defined in the individual assignment of the graduate student for pedagogical practice;*
- *conducting an objective self-assessment regarding the quality of the classes held, taking into account the assessment of the post-graduate student's work by the students of the groups where the classes were held;*
- *preparation of a report and a practice diary and passing a credit on pedagogical practice.*

*During pedagogical practice, graduate students get to know in detail the specialized disciplines taught at the department. Together with the head of practice, each graduate student chooses the department's profile disciplines, from which graduate students must prepare and conduct classes. A graduate student must attend classes in the chosen disciplines (lecture, seminar, practical or laboratory class) conducted by teachers who teach these disciplines at the department. After that, graduate students, under the supervision of teachers of the relevant disciplines, prepare and agree with the*

supervisor of the practice plan for conducting classes and start preparing material for lectures, practice, seminar or laboratory classes

At the time agreed with the teachers, the graduate student conducts the specified classes on his own. The head of practice, a teacher of this discipline, and other teachers and graduate students of the department may be present at the classes. Laboratory work must be carried out together with the teacher of the relevant discipline.

Additional meetings with leading teachers of the department can be arranged for graduate students. At the end of the pedagogical practice, the graduate student independently conducts a self-analysis of his own work.

The obtained results are highlighted in the practice report and reported when passing the credit for pedagogical practice.

#### **4. Educational materials and resources**

Basic literature:

1. Regulations on the organization of the educational process at KPI named after Igor Sikorsky. – 2020. [Electronic resource] – Mode of access: <http://osvita.kpi.ua/node/39>
2. Higher school pedagogy [Electronic resource]: textbook / V.P. Golovenkin; KPI named after Igor Sikorsky. - 2nd ed., revised. and additional – Electronic text data (1 file: 3.6 MB). – Kyiv: KPI named after Igor Sikorskyi, 2019. – 290 p.
3. Kuzminsky A.I. Higher school pedagogy: teacher. manual / A.I. Kuzminsky. - 2nd edition. - K.: Znannia, 2011. - 486 p.
4. Fitsula M.M. Higher school pedagogy: Education. manual - K.: "Akademvydav", 2006. - 352 p.
5. Nachaev V.M. Teaching methods in higher education: teaching. manual / V.M. Nachayev - K.: Center of Educational Literature, 2007. - 232 p.
6. Kalashnikova L.M., Zhernovnikova O.A. Higher school pedagogy in diagrams and tables: a study guide. - Kharkiv, 2016. - 260 p.

Additional literature:

1. Zgurovsky M.Z. The state and tasks of higher education in Ukraine in the context of the Bologna process. - K.: Polytechnic Polytechnic Institute, 2004. - 76 p.
2. P.M. Shcherban Applied pedagogy: Teaching method. manual -K.: Higher school, - 2002.- 215 p.
3. Vasylyuk A., Pakhotsynskyi R, Yakovets N. Modern educational systems: Education. manual - Nizhin: NDPU, 2002. - 139 p.
4. Educational technologies: Educational and methodological manual. / ed. OHM. Infantry - K.: "ASK", 2001. - 128 p.

### **Educational content**

#### **5. Methods of mastering the educational discipline (educational component)**

**Lecture classes:**

In accordance with the individual task of the graduate student, he attends a lecture (if necessary, several lectures) of the relevant professional discipline together with students. Attending lectures is aimed at familiarizing the graduate student with the specifics of teaching this discipline, getting to know the group of students.

*During the pedagogical practice, the practice leader can organize trips and excursions to other universities and organizations in order to get acquainted with modern approaches to the study of specialized disciplines.*

**Practical training:**

*In the individual task of pedagogical practice of the graduate student, information is necessarily provided about the professional disciplines, from which the graduate student must prepare and conduct a seminar, practical or laboratory class.*

*For a better understanding of the task and better preparation for conducting classes, a graduate student can attend a seminar or practical class in certain disciplines. In the event that an individual assignment on pedagogical practice requires a graduate student to conduct a laboratory session, prior attendance of a laboratory session by a graduate student is mandatory.*

**Independent work of a student/graduate student:**

*Independent work takes up 100% of the time allocated for pedagogical practice. The main task of the independent work of graduate students is the mastery of scientific knowledge in certain professional disciplines. The graduate student independently processes and prepares materials for conducting lectures, seminars, practical or laboratory classes. In the process of independent work within the framework of pedagogical practice, a graduate student must learn to deeply analyze modern approaches to the organization and conduct of classes at a university.*

**Approximate distribution of working time, days (10 days in total):**

- 1 Acquaintance with the practice program, calendar schedule. Obtaining an individual task. Training on the procedure of pedagogical practice and safety training - 1 day.*
- 2. Attending classes held by the department's teachers - 1 day.*
- 3. Preparation for classes - 2 days.*
- 4. Conducting lectures, seminars, practical or laboratory classes - 4 days.*
- 5. Excursion to other departments, other educational institutions and organizations - 1 day.*
- 6. Self-analysis of the completed work, preparation of a practice report - 1 day.*
- 7. Handing in the test and the practice report after the practice - after the practice.*

*Before starting the internship, each graduate student receives an individual assignment from the internship, which specifies which classes and which specialized disciplines he should take during the internship. Together with the teachers of the relevant disciplines, the graduate student agrees on the schedule of attendance and conducting classes in each discipline. The internship takes place according to the calendar drawn up by the internship manager. The head of the practice also helps to organize the preparation and conduct of classes. If necessary, the supervisor organizes additional consultations for graduate students with leading teachers. The graduate student records all stages of the individual assignment in a diary. All materials for training and conducting classes, the results of self-analysis are highlighted in the report.*

## **Policy and control**

### **6. Policy of academic discipline (educational component)**

*Postgraduate students are obliged to take an active part in the educational process, not to be late for classes and not to miss them without a valid reason, not to interfere with the teacher conducting classes, not to be distracted by actions unrelated to the educational process.*

*During the independent conduct of classes, the graduate student must comply with all ethical norms. The process of a postgraduate student's teaching practice is constantly monitored by the*

practice supervisor. Once a week, the supervisor checks the stages of completion of the individual task by the graduate student and the practice schedule. The last days of practice are set aside for processing and registration of all practice results. The graduate student completes the practice diary, prepares a practice report.

The volume of the report should be from 30 to 50 pages (A4 format) of printed text. The report is written on the basis of the collected materials in accordance with the practice plan and the individual task and consists of:

- the introduction, which states the purpose of the practice and the chosen ways to achieve it;
- schedule of practice and individual task;
- theoretical and other data that were used in preparation for conducting classes in certain disciplines;
- methods and means of quality control of classes;
- assessment and self-assessment results;
- conclusions;
- a list of literary and technical sources of information.

The reports specifically describe the work performed personally by the graduate student. The report is checked and approved by the head of practice.

Incentive points can be awarded by the teacher exclusively for the performance of creative works in the discipline or additional completion of online specialized courses with the receipt of the appropriate certificate: <https://prometheus.org.ua/courses-for-teachers/>.

The maximum number of incentive points cannot exceed 20% of the rating scale.

## **7. Types of control and rating system for evaluating learning outcomes (CRO)**

Distribution of study time by types of classes and tasks in the discipline according to the working study plan.

The rating of a graduate student in pedagogical practice consists of additional points that he receives during the practice and points that he receives when passing the credit from the practice.

Semester control is a credit.

To obtain a passing grade, the sum of all received rating points is translated according to the table:

Scores	Rating
100-95	perfectly
94-85	very good
84-75	fine
74-65	satisfactorily
64-60	enough
Less 60	unsatisfactorily
Conditions not met admission	not allowed

Working program of the academic discipline (syllabus):

**Compiled by** Ph.D., associate professor, of the department TC Oleg Tsukanov

**Approved by** the department of telecommunications (protocol No. 9 dated 25.05.2022)

**Agreed by** the Methodical Committee of the faculty (protocol No. 4 dated 02.06.2022)