



## Course syllabus

### Information and communication technologies in psychology

**Level of higher education** – Doctor of Philosophy

**Educational and scientific program** «Psychology»

**Class days:** Tue. 11:10 – 12:30

**Consultations:** Mon. 14:20 – 15:40

**Year of study:** II, **Semester:** III

**Number of credits:** 5 **Language of instruction:** Ukrainian

#### Course leader

Candidate of Psychological Sciences, Associate Professor Adamska Zoriana Mykhailivna

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#### Description of the discipline

The rapid information and technological development, which is observed today in the world, makes the need to find new approaches to vocational training experts, including future psychologists. The current pace of scientific and technological progress requires the ability to adapt to rapidly changing generations of technics and technologies, to replenish their professional knowledge in a short time and constantly improve professional competence. Of particular relevance in this context becomes introduction discipline "Information and communication technologies in psychology" in educational and scientific program of training doctors of philosophy specialty 053 Psychology. It is aimed at mastering by higher education students modern advanced conceptual and methodological knowledge in the field of research and professional activities, development of the ability to use modern information and communication technologies in communication, exchange of information, data collection, processing, analysis and interpretation.

#### Course structure

Hours (LEC/ SEM/ LAB)	Topic	Learning outcomes	Task
4/2/-	1. Information technology in modern education.	To analyze the didactic and psychological aspects of the introduction of information technology in the educational process. To understand the essence of the concepts of "information technology for learning", "software and methodological complex". To justify the main ways of using IT in education. To understand the didactic possibilities and negative aspects of IT use. To describe the learning functions of the computer. To carry out an analysis of the classification of educational software and hardware . To mastering the methods of using automated systems training in the training of specialists in universities.	Questions Tests Mind map Cases
-/-/4	2. Development of a model of electronic educational and methodical complex.	To understand the specifics of the use of computer technology in the modern educational process. To analyze the functions, purposes and features of the use of program-methodical complexes in working with students. To get acquainted with the platforms for the creation of	Practical tasks Cases

		electronic educational and methodological complexes. To analyze the structure of the layout of the electronic educational and methodological complex of the discipline, the features of its design. To master the algorithm for adding hyperlinks.	
-/-/2	3. Creating multimedia presentations.	To analyze the nature, types and specifics of the use of multimedia presentations in various fields of activity of the psychologist. To master the basics of presentation design. To justify the features and criteria of analysis and evaluation of the presentation. To develop recommendations for the content and design of multimedia presentations. To learn how to create effective presentations with graphics, animations and other multimedia elements, that meet modern requirements.	Practical tasks Cases Group discussions
-/2/2	4. Use of computer technology to monitor the quality of students' knowledge.	To analyze the specifics of the use of computer technology to monitor the quality of students' knowledge. To describe the classifications of tests, types of questions in the tests. To justify the features of assessing the quality of students' knowledge. To analyze the features of using software packages to create tests: Microsoft Excel, «Айреш», Test 2W, test designers. To master the ability to create different types of tests in Excel using the application package «Айреш», the program Test W.	Practical tasks Cases
2/2/-	5. Distance education in high school: problems and prospects.	To analyze the history of distance education: foreign and domestic experience. To analyze the features of the development of distance education in Ukraine. To define the essence, basic functions and principles of distance education. To describe the orientational structures of distance education and their characteristics. To understand the organizational principles and features of distance learning management. To describe the main technologies of distance education. To analyze distance learning systems and platforms: Moodle, Intell. To substantiate the psychological features of distance education, the specifics of virtual communication of the subjects of the educational process in the system of distance learning. To analyze the advantages and disadvantages of distance education of psychologists.	Questions Tests Mind map Essay

2/2/-	6. Introduction of information technologies in the work of a practicing psychologist.	To know the history of the introduction of computer technology in the work of practical psychologists. To analyze the content of the activities of a practical psychologist in the system "human-technique". To understand and adhere to ethical and professional principles of work in the system "human-technique". To describe the main directions and types of professional and psychological tasks in "human-technique" systems.	Questions Tests Mind map Essay
2/2/2	7. Computer psychodiagnostic methods as one of the tools of a practical psychologist.	To know the history of the formalization of mental phenomena, the stages of introduction of computers in the activities of a psychologist, the basic modes of using computer technology in psychology. To analyze the specifics of the use of computer psychodiagnostic techniques, advantages and disadvantages of computer psychodiagnostics. To develop guidelines for the effectiveness of computer psychodiagnostic techniques by practicing psychologists.	Practical tasks Cases Group discussions
-/2/2	8. The use of computer programs for the development of individual mental processes.	To understand the essence of computer modeling theory and its significance for psychology. To justify the peculiarities of the use of computer programs for the development of certain mental processes. To analyze electronic versions of computer simulators. To develop guidelines for the effectiveness of the use of computer programs for the development of certain mental processes by practicing psychologists.	Practical tasks Cases Group discussions
2/2/-	9. Methods of computer data processing in psychological research.	To justify the stages of psychological experimental research. To describe the means of simplifying mathematical calculations in psychological and pedagogical research. To analyze specialized software packages (BIOSTAT, DATASCOPE, MESOSAUR, ODA, Statit, WinSTAT) and general purpose packages for mathematical data processing (BAS, Minilab, OLIMP, Statistica, Stadia, Statgraphics, SyStat, SPSS, SAS, BMDP, x7, Excel). To describe the technical capabilities of software packages for mathematical data processing. To learn to choose methods of statistical processing, to implement it and interpret the results.	Practical tasks Cases
-/-/2	10. Specifics of computer data processing in psychological research. Using Excel.	To analyze the features of using the Excel spreadsheet editor to process psychological research data. To describe the technical capabilities of Excel. To learn to determine the numerical characteristics of the distribution, to perform correlation analysis of empirical data, to analysis of the reliability of data changes, to design the results of the study in the form of graphs and charts in Excel.	Practical tasks Cases

-/-/2	11. Specifics of computer data processing in psychological research. Using Statistica6.0.	To analyze the main features and characteristics of using a universal integrated program for statistical analysis and data processing Statistica. To learn to determine the main statistical indicators of empirical sampling, to perform correlation analysis, to build correlation matrices, to calculate the value of Student's t-test for dependent samples using a computer program Statistica.	Practical tasks Cases
-/-/2	12. Specifics of computer data processing in psychological research. Using IBMSPSS STATISTICS	To analyze the features of processing the results of psychological research using the application program IBM SPSS STATISTICS: to characterize the technical, functional capabilities. To learn to determine the main statistical indicators of empirical sampling, to perform correlation analysis, to build correlation matrices, to analyze the reliability of data changes using the application program IBM SPSS STATISTICS. To master the basic concepts of factor analysis, the ability to perform factor analysis using SPSS.	Practical tasks Cases
-/2/4	13. The role of the Internet in the work of a psychologist	To analyze the main categories of services provided by the Internet. To describe the possibilities of using the Internet in the work of a practical psychologist, research psychologist. To fills the collection of electronic educational resources. To create a catalog of psychological websites for use in the work of a practicing psychologists.and a psychologist-researcher.	Practical tasks Cases

### Literary sources

1. Адамська З. М. Психологічні особливості дистанційної освіти. *Шляхи удосконалення навчального процесу в контексті інноваційних змін у системі вищої освіти* : матеріали регіонального наук.-практ. семінару 25–26 травня 2011 р.
2. Бююль А., Цёфель П. SPSS: искусство обработки информации. Анализ статистических данных и восстановление скрытых закономерностей. СПб.: ООО «Диа Софт ЮП», 2002. 608 с.
3. Гуревич Р.С., Кадемія М. Ю., Шевченко Л. С. Інформаційні технології навчання: інноваційний підхід : навчальний посібник. Вінниця : ТОВ фірма «Планер», 2012. 348 с.
4. Дистанційне навчання: психологічні засади : монографія / [М.Л. Смульсон, Ю.І. Машбиць, М.І. Жалдак та ін.] ; за ред. М.Л. Смульсон. Кіровоград : Імекс-ЛТД, 2012. 240 с.
5. Калинин С.И. Компьютерная обработка данных для психологов. СПб.: Речь, 2002. 136с.
6. Котик І.О. Проблеми розвитку психологічних досліджень з використанням комп'ютерних технологій. URL: <http://psy-science.com.ua/department-newlearning.org.ua>
7. Крамер Д. Математическая обработка данных в социальных науках: современные методы: Учебное пособие для студ. высших учеб. заведений / пер. с англ. И.В.Тимофеева, Я. И. Киселевой; науч. ред. О.В.Митина. М.: Издательский центр «Академия», 2007. 288 с.
8. Максименко Ю. Комп'ютерна діагностика у психології. Психологія і суспільство. 2007. №4. С.56-72.
9. Основи науково-психологічних досліджень. Навчально-методичний посібник. [З. М. Адамська, І. П. Андрійчук, О. М. Воронкевич, Г. К. Радчук, С. В. Чопик, М. М.Шпак] ; за ред. Г. К. Радчук. Вид.2-ге, розшир. і доповн. Тернопіль: ТНПУ ім. В. Гнатюка, 2020. 214 с.
10. Полат Е.С. Новые педагогические и информационные технологи в системе образования:

Учебное пособие для студ. пед. вузов и системы повыш. квалиф. пед. кадров / Е.С. Полат, М.Ю. Бухаркина, М.В. Моисеева, А.Е. Петров; под ред. Е. С. Полат. М.: Издательский центр «Академия», 2002. 272 с.

11. Тюрин Ю.Н., Макаров А.А. Анализ данных на компьютере / под ред. В.Э.Фигурнова.[3-е изд., перераб и доп. М.: ИНФРА-М, 2003. 544 с.

12. Халафян А.А. STATISTICA 6. Статистический анализ данных: Учебник 3-е изд. М.: ООО

«Бином-Пресс», 2007. 512 с.

13. Хміль Н.А., Крутько О.М. Основні напрямки використання сучасних інформаційно-комунікаційних технологій у професійній діяльності психологів. Вісник Луганського національного університету імені Тараса Шевченка. 2010. №17 (204). С. 2019-215

14. Червинская К.Р. Компьютерная психодиагностика. СПб.: Изательство «Речь», 2003. 336 с.

15. Zhiliang W. Artificial Psychology–A most Accessible Science Research to Human Brain. URL:[http://en.cnki.com.cn/Article\\_en/CJFDTotal-BJKD200005022.htm](http://en.cnki.com.cn/Article_en/CJFDTotal-BJKD200005022.htm)

16. Landauer Thomas K. Relations between Cognitive Psychology and Computer System Design.URL: [http://www.audentia-gestion.fr/MIT/9780262532211\\_sch\\_0001.pdf](http://www.audentia-gestion.fr/MIT/9780262532211_sch_0001.pdf)

17. Online learning: Personal reflections on the transformation of education. Ed. by G. Kiersley. New-Jersey, 2005.

### Evaluation policy

- **Deadline and rescheduling policy:** papers that fail to meet deadlines without good reason are rated lower. Re-assembly of modules takes place with the permission of the dean's office if there are good reasons (for example, sick leave).

- **Academic Integrity Policy:** all written works are checked for plagiarism and are allowed to be defended with correct textual borrowings of no more than 20%. Cheating at the time control works and exams are forbidden (in including with the use of mobile devices). Mobile devices may only be used during online testing.

- **Attendance Policy:** attendance is a mandatory component of the assessment for which points are awarded. For objective reasons (for example, illness, international internship) class can take place in an online form for the approval of the head of the course.

### Evaluation

The final grade for the course is calculated as follows:

Types of evaluation	% of the final assessment
Module 1 (topics 1-5) - discussion of cases, oral examinations, practical tasks.	29
Module 2 (topics 6-8) - discussion of cases, oral examinations, practical tasks.	16
Module 3 (topics 9-13) - discussion of cases, oral examinations, practical tasks.	30
INDZ, independent work	10
Final control (topics 1-13) - test	15

### Student assessment scale:

ECTS	Rating in scores	Explanation
<b>A</b>	90 – 100	perfectly
<b>B</b>	85-89	very good
<b>C</b>	75-84	good
<b>D</b>	65-74	satisfactorily

<b>E</b>	60-64	enough
<b>FX</b>	35-59	unsatisfactorily (with the possibility of re-assembly)
<b>F</b>	1-34	unsatisfactorily (with the obligatory repeated course)