

Description of Discipline

Title of Discipline: <i>Computer Science</i>					
Semester	Duration	Type of Discipline	ECTS Credits	Academic Workload	Language of Instruction
1	180 hrs.	compulsory	6	50 hours of classroom training, 130 hours of self-study	Ukrainian

Learning Outcomes	Teaching Methods	Evaluation Methods
LO15. To use information and communication technologies to solve social-economic problems, prepare and submit analytical reports.	Lectures, taking notes, illustration, presentation, watching videos, instructing, exercises and tasks, laboratory work	Oral and written evaluation, evaluation using a computer, reports, exam
LO16. The ability of abstract thinking, analysis and synthesis to identify key characteristics of economic systems of different levels as well as behavior features of their business entities.	Lectures, presentations, watching videos, exercises, tasks and practice	Oral and written evaluation, final tests, reports, graphic methods, exam

Title of Discipline / Computer Science				
Semester	Duration	Type of Discipline	ECTS Credits	Student Workload
1	180 hrs.	mandatory	6	50 hours of teaching, 130 hours of self-study

Requirements for Participation	Type of examination (oral, written, term paper, etc.)	Methods of teaching and learning (lectures, seminars, etc.)	Discipline Coordinator
Complete general secondary education	Written exam (computer)	Lectures, practical classes, laboratory work	O. Drozd

Learning Outcomes
GC4. Ability to apply knowledge in practical situations. GC5. Ability to communicate in the state language both orally and in writing. GC6. Ability to communicate in a foreign language. GC7. Skills in the use of information and communication technologies. GC8. Ability to search, process and analyze information from various sources. SC7. Ability to use computer technology and data processing software to solve economic problems, analyze information and prepare analytical reports. SC10. Ability to use modern sources of economic, social, managerial, accounting information for the preparation of official documents and analytical reports.

SC18. Ability to analyze the international economy as a systemic complex of relations between the subjects and the processes of regionalization of world economic relations with the use of modern information technologies.

PLO16. Be able to think abstractly, apply analysis and synthesis to identify key characteristics of economic systems at different levels, as well as the behavior of their subjects.

PLO31. Master the skills of oral and written professional communication in state and foreign languages.

PLO32. Demonstrate basic skills of creative and critical thinking in research and professional communication.

PLO33. Ability to organize and conduct conferences, round tables, seminars, etc. in native and foreign languages.

PLO34. Be able to use communication technologies to maintain harmonious business and personal contacts as a prerequisite for business success.

PLO36. Ability to present and discuss the results obtained and transfer the acquired knowledge.

PLO37. Identify and plan opportunities for personal professional development.

Contents

MODULE 1. BASICS OF COMPUTER SCIENCE. TECHNIQUES TO WORK WITH STRUCTURED DOCUMENTS

Topic 1. Basics of information systems and technologies. Architecture and principles of PC operation.

Basics of Computer Science. Architecture of modern PC. Systems of calculation. File system. An overview of operating systems.

Topic 2. Technology of creation and formatting of text documents.

Word service opportunities. Working with tables. Working with objects.

Topic 3. The technology of creating and formatting spreadsheets and diagrams.

Excel structure. Data entry and formatting. Formulas entry. Construction of diagram. Data filtering. Tools to calculate results. Tools to solve analytical tasks.

MODULE 2. FUNDAMENTALS OF DATABASES

Topic 4. Fundamentals of relational databases.

Data models. Terms of relational databases. Database normalization. Rules for binding tables. Stages of database design.

Topic 5. Working with data tables.

Table structure of a substitution field. Table binding.

Topic 6. Creating queries to databases.

Data selection queries. Calculation of totals in a query. Query lines. Crosstab query. Queries about data modification in tables.

Topic 7. Creating reports.

Report structure. Control elements in reports. Grouping data in reports. Reports with subordinate reports.

Topic 8. Форми і макроси. Forms and macros.

The purpose of forms. Object structure of forms. Object properties and events. Macros and macros. Button forms. Macros and macroinstructions.

MODULE 3. COMPUTER NETWORKS AND TELECOMMUNICATION

Topic 9. Technologies of computer networks.

Architecture of computer networks. Protocols of computer networks. Network services.

Topic 10. Data security in computer networks.

General characteristics and principles of security system organization. The use of firewalls and proxy servers. Protection levels of information systems.

Exemplary Literature

Primary

1. Maslov V.N. Information systems and technologies in economics: Textbook. - K.: Slovo, 2009. - 263 p.
2. V.M. Bespalov. Informatics for economists: A textbook for students of higher educational institutions of economic specialties. - K.: ЦУЛ, 2003. - 788 p.
3. Dibkova L.M. Informatics and Computer Engineering: A Handbook for University Students. - K.: Publishing Center "Academy", 2002. - 320 p.
4. Gaina G.A. Fundamentals of database design: Textbook. - K.: Kondor, 2008. - 199 p.
5. Zhukov I.A., Gumenyuk V.O., Altman I.E. Computer Networks and Technologies: Textbook. manual. - K.: HAY, 2004
6. Samsonov V.V., Yerokhin A.L. Methods and tools of Internet technologies: Textbook. manual. - Kharkiv: SMITH, 2008. – 26
7. John Walkenbach Excel® 2007 Bible 2007 – Published by Wiley Publishing, Inc. – 914 p.
8. Microsoft Office Access 2003 Bible(ENGL). Cary N. Prague, Michael R. Irwin, and Jennifer Reardon. 2007. – 620 p.

Supplementary

1. Valetskaya T.M., Babiy P.I., Grigorishin I.A. etc. Informatics and computer technology in laboratory works: Textbook. Kyiv: Center for Educational Literature, 2009.
2. Makarova M.V., Karnaukhova G.V., Zapara S.V. Informatics and computer technology: Textbook. manual. - 3rd ed. Sumy: University Book, 2008. - 667 p.
3. Bondarenko M.F., Kachko O.G. Operating systems: Textbook. manual. - Kharkiv: SMITH Company, 2008. - 431p.
4. Gaidarzhi V.I., Datsyuk O.A. Fundamentals of database design and use: A textbook. - K.: Polytechnic; Periodicals, 2011. - 254p.

Web resources

1. Scientific Library of Chernihiv Polytechnic National University. [Electronic resource]. - Access mode: <http://library2.stu.cn.ua/>
2. Distance learning site of CPNU. [Electronic resource]. - Access mode: <http://eln.stu.cn.ua/login/index.php>.
3. On-line library. [Electronic resource]. - Access mode: <http://citforum.ru/>.
4. Office help and study materials. [Electronic resource]. - Access mode: <https://support.office.com/uk-ua>.
5. Solving economic problems in Excel. Workshop. [Electronic resource]. - Access mode: <http://www.studfiles.ru/preview/1669501/>

Academic staff

Name	Academic degree	Position	Qualification / Academic Discipline	Full-time / Part-time	Area of Teaching
Drozd Oleksandr Petrovych		Senior Lecturer at the Department of Computer Science and Computer Systems	Kyiv International University of Civil Aviation (1996), specialty – Computerized Systems of data processing and management, qualification – System engineer	Part-times	Computer Science, Fundamentals of Systems Theory