

Work programme of the discipline:

Course title	INFORMATION AND DIGITAL TECHNOLOGIES
Level of higher education (degree)	FIRST(BACHELOR)
Field of study	07 MANAGEMENT AND ADMINISTRATION
Major	073 MANAGEMENT
Program subject area	MANAGEMENT (ENGLISH)
Status of the discipline	Compulsory
Mode of studies	FULL-TIME, PART-TIME, E-LEARNING
Total number of hours/ ECTS credits	150 HOURS /5 ECTS CREDITS
Language of instruction	ENGLISH
Lecturer	TROTSKO VOLODYMYR VALENTINOVYCH
Lecturer's profile	https://www.krok.edu.ua/ua/pro-krok/spivrobitniki/trotsko-volodimir-valentinovich
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Consultations	CONSULTATIONS IN MS TEAMS: THURSDAY, 16:00 P.M.-16.30 P.M.

1. Brief summary of the course

The purpose of the course is to provide knowledge in the field of modern information and digital technologies that can be used in management and administration.

The course objectives are:

- to develop students' understanding of the role of digital technologies as a tool for obtaining and analyzing information necessary for management and administration

- to provide information about the main applications that can be used in management and administration

- to develop students' skills in using existing technologies to solve individual computational and information problems

to provide information about the main techniques and methods of working on the Internet, including information protection

As a result of studying the academic discipline, the student must know:

how to use modern information technologies to obtain the necessary information and verify its authenticity;

how to install computer applications and use them to solve management and administration tasks;

how to use applications to create online and offline presentations;

specifics of avoiding threats of information loss and leakage when using digital technologies.

be able to:

use software applications to perform information analysis in management and administration;

calculate individual tasks using software applications offline and online;

use various means of searching for information on the Internet, using both global search tools and specialized sites;

effectively use modern information and communication tools.

2. Learning outcomes

General competencies (GC)

GC8 - Skills in the use of information and communication technologies.

GC12 - Ability to generate new ideas (creativity).

Professional competencies (PC)

PC7 - Ability to choose and use modern management tools.

PC10 - Ability to evaluate the work performed, ensure their quality and motivate the staff of the organization.

PC11 - Ability to create and organize effective communications in the management process.

Program learning outcomes (PLO)

PLO6 - Demonstrate skills of search, collection and analysis of information, calculation of indicators to justify managerial, innovation and investment decisions.

PLO7 - Demonstrate organizational design skills.

PLO11 - Evaluate the legal, social and economic consequences of the organization functioning, including labour relations in the organization.

3. Course scope

Type of class	Total number of hours/ ECTS credits – 150 HOURS /5 ECTS CREDITS		
	full-time	part-time	e-learning
Total number of hours / mode of studies			
lectures	-	-	-
seminars / practical	50	21	21
Individual work	100	129	129

4. Prerequisites

There are no prerequisites required for this course.

5. Hardware and software

PC / laptop, Internet access, camera, microphone

6. Course policies – students must adhere to a code of academic integrity:

<https://int.krok.edu.ua/images/download/code-of-academic-integrity-2025.pdf>

Academic integrity is the presentation of one's own work and the proper recognition of the contribution of others.

Any violation of this principle constitutes academic dishonesty and may result in poor evaluation and disciplinary action.

Forms of academic dishonesty include:

- Plagiarism - presenting all or part of someone else's work as one's own in an academic exercise, such as an exam, a computer program, or a written assignment.
- Fraud - Using or attempting to use unauthorized materials during an exam or assignment, such as using unauthorized texts or notes or improperly obtaining (or attempting to obtain) a copy of an examination or exam answers.
- Promoting academic dishonesty - helping others commit an act of dishonesty, such as replacing an exam or completing a task for someone else.
- Fabrication - modification or transfer, without permission, academic information, or records.

7. Programme of the course

Module #1

Topic1: Main computer application for management and administration

The subject of information and digital technologies. How digital technologies stand out among other information technologies. What are the practical possibilities of modern digital technologies.

Topic2: Access to information and its processing using digital technologies

Operating systems and computer programs. Universal software applications for management and administration.

Topic3: Specific functions for solving management and administration tasks in software applications

Office programs as a tool for practical use in management and administration. How many applications do we need for more efficiency work.

Topic4: Information exchange, effective use of data storage facilities. Data analysis tools

Databases as management tool. Access database. Additional office programs and their use in management. How to collect and use data.

Topic5: Multifunctionality of office programs. Correct use of office MS to solve management tasks

How to use Office programs for different tasks.

Topic6: Spreadsheets as a tool for management

What can be used in MS Excel for management. Main spreadsheet functions. Modern expansion of tools in spreadsheets. Data transferring. Execution and analysis using spreadsheet applications. Charts and solutions tools.

Topic7: Presentations, publications and other means of demonstration in modern information systems

Applications for demonstrations. Set of functions. Main rules for successful presentation. Additional office programs and their use in management.

Module #2

Topic 8: Internet technologies

Internet browsers. How to create and configure accounts in Internet browsers. LMS programs. Moodle.

Topic 9: Finding information on the Internet

Requests for finding and selection. Finding rules. Understanding the results.

Topic 10: Microsoft 365

Microsoft 365 as a comprehensive information system for practical use.

Topic 11: The modern concept of Internet Software

The modern concept of Software + Services and its practical use. Solutions for Software + Services from various companies. Features of using this concept in Microsoft 365. Software as a service, SaaS and its differences from Hosted Applications and Application Service Provider (ASP).

Topic 12: Computer security and information protection

Threats to information in modern information systems. Methods of ensuring information security. Antiviruses programs and protection methods.

8. Course scheme

Topic	Number of hours									Control form
	Full-time			Part-time			E -learning			
	Lectures	Seminars /practical	Individual work	Lectures	Seminars /practical	Individual work	Lectures	Seminars /practical	Individual work	
Module # 1										
Topic1: Main computer application for management and administration		4	8		1	10		1	10	IA, S, T, CS
Topic2: Access to information and its processing using digital technologies		4	8		1	10		1	10	IA, S, T, CS
Topic3: Specific functions for solving management and administration tasks in software applications		4	10		2	13		2	13	S, T, CS
Topic4: Information exchange, effective use of data storage facilities. Data		4	8		2	10		2	10	S, T, CS

analysis tools										
Topic5: Multifunctionality of office programs. Correct use of office MS to solve management tasks		4	8		2	13		2	13	S, T, CA, CS
Topic6: Spreadsheets as a tool for management		4	8		2	10		2	10	S, T, CA, CS
Topic7: Presentations, publications and other means of demonstration in modern information systems		4	8		2	10		2	10	IA, S, T, CA, CS
Module #2										
Topic 8: Internet technologies		4	8		2	10		2	10	S, T, CA, CS
Topic 9: Finding information on the Internet		4	8		1	10		1	10	S, T, CA, CS
Topic 10: Microsoft 365		4	8		2	10		2	10	S, T, CA, CS,
Topic 11: The modern concept of Internet Software		6	10		2	13		2	13	S, T, CS
Topic 12: Computer security and information protection		4	8		2	10		2	10	S, T, CA, CS
Total hours		50	100		21	129		21	129	-
TOTAL		150			150			150		-

Control form

IA – individual assignments

S – survey

T – test, mid-term tests

CA – calculation assignments

CS – solving case-studies

9. Individual tasks

Individual tasks are an integral part of the educational process, as they contribute to the development of analytical skills, creative thinking and independence of students.

Content of an individual educational and research task (educational project)
<p>The individual task consists of three types of questions, task options posted on the moodle platform:</p> <ol style="list-style-type: none"> 1. Open question: <ul style="list-style-type: none"> o Requires a detailed, detailed answer based on theoretical knowledge and analysis of additional information. o Tests your understanding of the topic, ability to formulate your own opinions and argue your position. 2. Calculation task: <ul style="list-style-type: none"> o Involves performing certain calculations using formulas or business models. o Tests knowledge of math methods and the ability to apply them in practice. 3. Situational task: <ul style="list-style-type: none"> o Presents a real business problem or case that needs to be analyzed and a solution proposed. o Tests your ability to apply theoretical knowledge to solve practical problems and make informed decisions. <p>Requirements for completing the task:</p> <ul style="list-style-type: none"> • Clear structure: Answers should be logically structured, contain an introduction, main body and

conclusions.

- Argumentation: Each statement must be supported by arguments and references to sources.
- Accuracy of calculations: When performing calculations, it is necessary to observe accuracy and use appropriate units of measurement.
- Originality: Answers must be your own and contain no plagiarism.
- Design: The work must be designed in accordance with the requirements specified on the moodle platform.

10. Teaching methods

In the process of studying the discipline "Entrepreneurship and starting a company", various types of educational activities, teaching methods and technologies are used.

Types of educational activities:

1. Lectures: classes where the teacher presents theoretical and practical guidance material, analyzing the main concepts and tools of marketing.

2. Practical classes: focus on the application of Entrepreneurship tools.

Teaching methods and technologies:

1. Presentations and multimedia materials: the use of slides, videos and graphs, which facilitate the perception of information and make the educational process more visual.

2. Active learning methods: include group projects, discussions, role-playing games, and brainstorming sessions that promote active student involvement in the process.

3. Case method: analysis of real business situations, which allows students to practically apply theoretical knowledge, develop critical thinking and decision-making skills.

Use of information technologies: interactive platforms for learning

11. Control methods

Control measures are used to determine the success of training. Control measures include mid-term tests (2) and final control.

Mid-term tests are carried out during practical (seminar) classes and is aimed at checking the level of preparedness of the student to perform a specific task.

The final control is carried out to evaluate the learning results after the end of the study of the discipline (semester control) or modules separated according to the working curriculum.

During the study of this course, the following forms of current control are used: a mid-term tests.

When studying this course, the following form of semester control is used: credit.

12. Distribution of points received by students

Evaluation of student learning results is carried out according to the University scale (0-100, taking into account optional tasks - 120 points) and the national scale.

General course evaluation system: Participation in the work during the semester / exam – 70%/30%

All tasks must be written independently, plagiarism is prohibited, no references or citations are required. The quality and originality of your arguments are evaluated. The assignments should be presented in Moodle.

13.1. Scoring scheme for the course

Type of educational activity	Max score	Max total score
Modules #1 & #2		
Solving case-studies (3 x 5 points)	15	
Calculation assignments (4 x 2,5 points)	15	

Surveys / Test (2 x 5 points)	10	
Individual work (1 x 10 points)	15	
Mid-term test (2 x 7,5 points)	15	
Total for modules #1 & #2	70	
Final test	30	
Total for the course		100

13.2. Conditions for awarding points

1. Solving case-studies (Maximum Score – 5 Points)

- Completeness of the Solution (2 Points): All stages of the problem-solving process are correctly presented, and all formulas and methods are justified.
- Accuracy of Answers (2 Points): All numerical data and calculation results must be accurate.
- Clarity of Presentation (1 Point): Logical structure of the work, clear presentation of solutions, and correct terminology.

2. Calculation assignments (Maximum Score – 2,5 Points)

- Completeness of the Solution (1 Point): All stages of the problem-solving process are correctly presented, and all formulas and methods are justified.
- Accuracy of Answers (1 Point): All numerical data and calculation results must be accurate.
- Clarity of Presentation (0,5 Point): Logical structure of the work, clear presentation of solutions, and correct terminology.

3. Tests (Maximum Score – 5 Points)

- Number of Correct Answers (5 Points): Students receive 0,25 points for each correct answer (total number of tests per session is 20).

4. Survey (Maximum Score – 5 Points)

- Correctness of Answers (3 Points): Answers to questions must be accurate and correct.
- Coverage of the Topic (2 Points): Answers should demonstrate knowledge of all key aspects of the topic.

5. Oral presentation (Maximum Score – 5 Points)

- Substance (2 Points): Completeness and depth of topic coverage, inclusion of relevant data and examples.
- Visual Presentation (2 Points): Quality of slides, use of graphics, clarity, and aesthetics.
- Communication Skills (1 Point): Ability to convey information to the audience, respond to questions, and engage listeners.

6. Individual Work (Maximum Score – 10 Points)

- Depth of Research (3 Points): Quality of topic analysis, use of various sources of information and literature.
- Structure and Formatting (2 Points): Adherence to formatting requirements, logical structure of the work, correctness of citations.
- Originality and Creativity (2 Points): Presence of personal conclusions, recommendations, and interesting ideas.
- Responses to Questions (3 Points): Engagement in presenting work results, participation in discussions, and feedback.

7. Mid-term tests (Maximum Score – 7,5 Points)

- Number of Correct Answers (5 Points): Students receive 0,25 points for each correct answer (total number of tests per session is 30).

13.3. Final assessment criteria

University scale	Ukrainian Grade
90 and higher	excellent
70–89	good
50–69	satisfactory
1–49	unsatisfactory

14. Methodological provision

Attention students: all educational and methodological materials (lecture plans and videos, presentations/seminar assignments/case-studies, etc.) are submitted in Moodle Course: Information and Digital Technologies_Троцько: <https://dist.krok.edu.ua/course/view.php?id=906>

15. Recommended literature

Basic

1. Kathleen M. Austin, Lorraine N. Bergkvist Principles of Digital Information Technology Second Edition, Revised, Student Textbook URL -<https://www.amazon.com/Principles-Digital-Information-Technology-Kathleen/dp/164564099X>

2. Graham Brown, Brian Sargent Cambridge International AS Level Information Technology Student's Book Second Edition Boost eBook URL - <https://www.hoddereducation.com/cambridge-international-as-level-information-technology-student-s-book-second-edition>

Additional

James Holler The Microsoft Office 365 Bible: The Most Updated and Complete Guide to Excel, Word, PowerPoint, Outlook, OneNote, OneDrive, Teams, Access, and Publisher from Beginners to Advanced Paperback – July 3, 2024 – URL – <https://www.amazon.com/office-365-Books/s?k=office+365&rh=n%3A283155>

16. Additional information on the discipline (educational component)

Certificates of completion for distance or online courses on the relevant topics may be credited provided that the requirements outlined in the corresponding regulation are met.

Work programme of the discipline:

Compiled by: Associate Professor of the Department of Computer Science, PhD in Military, docent Volodymyr Trotsko.

Approved: at the meeting of the Department of International Business (Protocol No. 2 dated September 17, 2024).