Work programme of the discipline:

Course title	**APPLIED COMPUTER 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
Tel. number	+380672361378
E-mail	trotskovv@krok.edu.ua
Consultations	CONSULTATIONS IN MS TEAMS: THURSDAY, 16:00 P.M.-16.30 P.M.

1. Brief summary of the course

The goal of the course is to provide knowledge about existing applied computer technologies and the possibilities of their use in management and administration.

Course objectives:

to teach students to navigate in the modern information space and use applied computer technologies to perform management and administrative tasks;

to form in students an understanding of the difference between applied computer programs and applied computer technologies;

to develop in students the skills of quickly mastering applied computer technologies.

As a result of studying the academic discipline, the student should

know:

what are applied computer technologies;

for solving which tasks are applied computer technologies used;

how to use online and offline technologies and process data sets.

be able to:

use applied computer technologies to perform tasks in management and administration.

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)
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		
Total number of hours / mode of studies	full-time	part-time	e-learning
lectures	28	14	14
seminars / practical	22	7	7
Individual work	100	129	129

4. Prerequisites
Information and Digital Technologies.

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: The subject of applied computer technologies. Developing Apps technology of nowadays

What distinguishes applied computer technologies. Variety of computer programs. Technological directions of development.

Topic 2: Application technologies for management

Applied computer technologies in management. Programs for managing enterprises and subdivisions. Digitalization of management processes

Topic 3: "Standard" application technologies. Features of these technologies and usage them for management

How to use available applications to organize the management process. Features of using office software packages

Topic 4: Special application technologies for management. Using on-line application resources for management

Specialized computer applications. Scope of use and features of implementation in management. Advantages and disadvantages of Internet technologies in the use of applications

Topic 5. Application technologies for administration

Microsoft Dynamics 365. Technology for creating a management environment

Topic 6: Using features of Saas, Iaas and Paas technologies conceptions in administration

Features of Saas, Iaas and Paas technologies. Possibilities for use

Topic 7: Microsoft application solutions for administration and other application solutions

Practical aspects of Microsoft applied technology. Solving management problems

Module #2

Topic 8: GIS technologies for management solutions

GIS technologies and their use. ArcGIS and QGIS programs and their features. How the use of GIS technologies affects management efficiency. The impact of Internet technologies and GIS applications

Topic 9: AI technologies and applications

The importance of artificial intelligence for the development of computer technologies in general. Artificial intelligence applications and their use in management

Topic 10: Expert systems

Expert systems and their use in management. The feasibility and features of using expert systems in management

Topic 11: IT marketspace

What is IT marketspace and what is its significance for the modern information and social environment?

Topic 12: e-Development

Developing an enabling environment for policy/system improvements, infrastructure provision, and human resource development to enhance ICT literacy and professional skills

Topic 13: IoT applications

How does the Internet of Things differ from the Internet of People? Developing the Internet of Things to improve management

Topic 14: Different aspects of using applied computer technologies

Social, cultural and ethical aspects of the use of computer applications. Dependence on application programs in management. Conditions for the use of computer applications in management

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: The subject of applied computer technologies. Developing Apps technology of nowadays	2	1	6	2	1	8	2	1	8	IA, S, T, CS, P
Topic 2: Application technologies for management	2	1	6	2	1	8	2	1	8	IA, S, T, CS, P
Topic 3: "Standard" application technologies. Features of these technologies and usage them for management	2	1	6			9			9	IA, S, T, CS, P
Topic 4: Special application technologies for management. Using on-line application resources for management	2	1	6	2	1	8	2	1	8	IA, S, T, CS, P
Topic 5. Application technologies for administration	2	1	6			8			8	S, T, CA, CS, P
Topic 6: Using features of Saas, Iaas and Paas technologies conceptions in administration	2	1	6	2	1	8	2	1	8	S, T, CA, CS, P

Topic 7: Microsoft application solutions for administration and other application solutions	2	2	6			9			9	S, T, CA, CS, P
Module #2										
Topic 8: GIS technologies for management solutions	2	2	8	2	1	8	2	1	8	S, T, CA, CS, P
Topic 9: AI technologies and applications	2	2	8			10			10	S, T, CA, CS, P
Topic 10: Expert systems	2	2	8	2	1	8	2	1	8	S, T, CA, CS, P
Topic 11: IT marketspace	2	2	8	2	1	8	2	1	8	S, T, CS
Topic 12: e-Development	2	2	8			10			10	S, T, CA, CS, P
Topic 13: IoT applications	2	2	8			12			12	IA, S, T, CS, P
Topic 14: Different aspects of using applied computer technologies	2	2	10			15			15	S, T, CS, P
Total hours	**28**	**22**	**100**	**14**	**7**	**129**	**14**	**7**	**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)
The individual task consists of three types of questions, task options posted on the moodle platform: 1. Open question: 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: 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: 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. Requirements for completing the task: • 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

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)	10	
Surveys / Test (2 x 5 points)	10	
Oral presentation (2 x 5 points)	10	
Individual work (1 x 10 points)	10	
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: Applied Computer Technologies_Троцько: https://dist.krok.edu.ua/course/view.php?id=1367

15. Recommended literature

Basic

1. Leonard J. Ledger Microsoft Office 365 For Beginners: The 1# Crash Course From Beginners To Advanced. Easy Way to Master The Whole Suite in no Time | Excel, Word, ... Teams & Access (Mastering Technology) 26 Sept 2022 URL – https://www.amazon.co.uk/office-365-Books/s?k=office+365&rh=n%3A266239

2. Robert Michon The Complete Guide to Software as a Service: Everything you need to know about SaaS URL – https://www.amazon.com/Complete-Guide-Software-Service-Everything/dp/1546308490

3. Metin Karatas Developing AI Applications: Beginner-Friendly Guide to Building AI Solutions from Scratch with No-Code Tools (Rheinwerk Computing) URL – https://www.amazon.com/Developing-AI-Applications-Metin-Karatas/dp/1493226010

4. Gerardus Blokdyk CRM Technology A Complete Guide - 2021 Edition URL – https://www.amazon.com/CRM-Technology-Complete-Guide-2021/dp/1867413086

Additional

Sung Y. Shin, John Kim Applied Computing Review URL – https://www.sigapp.org/acr/Issues/V13.4/ACR-13-4-2013.pdf 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).