МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ
ІМЕНІ СЕМЕНА КУЗНЕЦЯ

ЗАТВЕРДЖЕНО
на засіданні кафедри
інформатики та комп'ютерної техніки
Протокол № 2 від 2.09.2024 р.

ПОГОДЖЕНО
Проректор з навчально-методичної роботи

_____ Каріна НЕМАШКАЛО

ІНФОРМАТИКА

робоча програма навчальної дисципліни (РПНД)

Галузь знань	**07 "Управління та адміністрування"**
Спеціальність	**075 "Маркетинг"**
Освітній рівень	**перший (бакалаврський)**
Освітня програма	**"Маркетинг"**

Статус дисципліни	**обов'язкова**
Мова викладання, навчання та оцінювання	**англійська**

Розробники:
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Завідувач кафедри
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Гарант програми   Олена НЕБИЛИЦЯ

Харків

2024

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS

APPROVED
at the meeting of the department
Informatics and Computer Engineering

Protocol №2 of 02.09.2024

AGREED
Vice-rector for educational and methodical work

Karina NEMASHKALO

INFORMATICS

program of the course

Field of knowledge   **07 "Management and administration"**
Specialty   **075 "Marketing"**
Study cycle   **first (bachelor)**
Study programme   **"Marketing"**

Course status   **mandatory**
Language   **English**

Developers:
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Kharkiv

2024

INTRODUCTION

In the conditions of the modern economy, reliable, valuable and rich marketing information is needed to make effective marketing decisions. In connection with the more frequent use of electronic resources by consumers to research the options for choosing and buying the desired product, the role of modern information technologies, software and technical means of transmitting, processing and saving information is growing. It is important for marketers not only to be able to apply general-purpose software and products in practice, but also to be competent in algorithmization, use of the Internet and web technologies in solving various economic problems, creation and maintenance of information systems based on database management systems.

The course "Informatics" is a mandatory course and is studied in accordance with the curriculum for the preparation of higher education applicants in specialty 075 "Marketing" of the first (bachelor's) level of all forms of education. The program of the course was developed in accordance with the educational and professional program "Marketing".

The program of the course provides the learning in the form of lectures, laboratory classes and self-studies of students of higher education. For the practical assimilation of the main topics of the discipline - laboratory classes, individual work and consultations are conducted using personal computers, a local network and the Internet in computer classes. All types of classes are provided with the necessary electronic methodical materials.

The purpose of teaching the course is the formation of future specialists' system of competences in the effective use of modern information technologies and specialized software in professional activities.

The subject of study of the course is modern information technologies for automating the search, processing and analysis of information.

The object of study of the discipline is marketing information systems.

The learning outcomes and competencies formed by the course are defined in Table 1.

Table 1

Learning outcomes and competencies formed by the course

Learning outcomes	Competencies
LO2	GC9
LO3	SC10
LO4	GC9
LO7	SC12
LO8	GC3, GC4, SC1, SC10
LO10	GC9
LO16	GC4
LO18	GC2

where: GC2. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technologies, to use various types and forms of motor activity for active recreation and leading a healthy lifestyle.

GC3. Ability to abstract thinking, analysis and synthesis.

GC4. Ability to learn and master modern knowledge.

GC9. Skills of using information and communication technologies.

SC1. The ability to logically and consistently reproduce the acquired knowledge of the subject area of marketing.

SC10. The ability to use marketing information systems in making marketing decisions and develop recommendations for improving their effectiveness.

SC12. The ability to substantiate, present and implement the results of research in the field of marketing.

LO2. Analyze and forecast market phenomena and processes based on the application of fundamental principles, theoretical knowledge and applied skills of marketing activities.

LO3. Apply acquired theoretical knowledge to solve practical tasks in the field of marketing.

LO4. Collect and analyze the necessary information, calculate economic and marketing indicators, substantiate management decisions based on the use of the necessary analytical and methodical tools.

LO7. Use digital information and communication technologies, as well as software products necessary for the proper implementation of marketing activities and the practical application of marketing tools.

LO8. Apply innovative approaches to the implementation of marketing activities of a market entity, flexibly adapt to changes in the marketing environment.

LO10. Explain information, ideas, problems and alternative management decisions to specialists and non-specialists in the field of marketing, and representatives of various structural units of the market entity.

LO16. To meet the requirements of a modern marketer, to raise the level of personal professional training.

LO18. Demonstrate responsibility in relation to moral, cultural, scientific values and achievements of society in professional marketing activities.

COURSE CONTENT

Content module 1. Using the MS Office package to solve economic problems.
Topic 1. Technologies for creating and editing text documents.
1.1. Creating and editing documents in MS Word. Methods of entering text in a document, formatting text. Saving and closing documents, updating documents. Document page layout, page numbering and editing headers and footers. Creating a document structure, organizing automatic formatting of the document content, adding a

hyperlink to the document. Checking the spelling of the document. Editing a document using the search and replace mechanism, adding notes to the document. Entering a password to the document.

1.2. Searching for the information in the Internet.

Types of information and information evaluation. Search systems and their classification. Google search operators. Searching for documents and files with different extensions.

Topic 2. Using the MS Excel spreadsheet for data processing and analysis

2.1. Using MS Excel functions in calculations.

Creating spreadsheets. Data types in MS Excel. Formatting data in spreadsheets. Organizing calculations in MS Excel. Absolute and relative references. Using cell names and ranges in formulas. Using the function wizard for economic calculations and processing text arrays. Working with spreadsheet data. Multi-table information processing. Graphical representation of information when solving economic problems.

2.2. Analyzing tabular data using MS Excel.

Technology of data processing in the spreadsheet environment using built-in operators and functions. Sorting and searching for data in lists. Using forms for entering and editing lists. Using filters and sorting for data analysis. Functions for processing tables as data lists, rules for their use. Building pivot tables. Using subtotals and slices for data analysis. Conditional formatting of spreadsheets. Data analysis and forecasting using graphical spreadsheet tools.

Content module 2. Using Web technologies in the economics

Topic 3. Fundamentals of Web design

3.1. The essence of Web design.

The essence of Web design. The concept of hypertext documents and websites. Types of Web pages. Basic types of navigation. HTML language. Standards, document structure, main sections of a Web page. Tags that define the structure of a Web document. Creating a template code for a Web page in a text editor and checking it in a browser.

3.2. Creating Web pages.

Tags for formatting and marking up a document. Inserting images on a page. Tags for creating lists of different types. Principles of building tables. Overview of table creation tags and their parameters. The concept of a hyperlink. Types of hyperlinks. Hyperlink creation technology. Navigation maps and the procedure for their creation. Using forms on Web pages. Overview of tags for creating form elements. Using multimedia objects on a website.

Topic 4. Creating websites.

4.1. The concept of style. Types of styles. Connecting CSS to an HTML document. Selectors and their types. Formatting elements of a Web document using CSS: font, background, color, lists.

4.2. The concept of a block. Properties for formatting blocks. Types of positioning of Web page elements. Block approach to creating a website. Features of working with Bootstrap technology. Adaptive layout. The concept of hosting.

Content module 3. Design and use of databases in the economy

Topic 5. Fundamentals of database design.

5.1. The concept of a database.

The concept of a database (DB). Architecture of database management systems (DBMS). Functional capabilities of a DBMS. Data models. Subject area. Database architecture. The concept of a database schema, stages of database design.

5.2. Relational database.

Logical and physical independence from data in the database. Basic database objects and their characteristics. Normalization of relationships. Rules for forming normal forms. Stages of design of relational databases. Database planning. Analysis of database requirements. Conceptual, logical and physical design. Entity-relationship data model. Entities, attributes, types of relationships between entities and their characteristics. Tools for automating database design.

Topic 6. Designing relational database objects.

6.1. Using the table designer when creating a database. Data types of table fields. Forming queries.

6.2. Tools and software for creating user interfaces. A form as the main object for entering, editing, and viewing database data in the user interface. Publishing information using reports. Configuring the user interface and database administration.

The list of laboratory studies in the course is given in the Table 2.

Table 2

The list of laboratory studies

Name of the topic and/or task	Content
Topic 1-2. Task 1	Search in Internet. Google search operators, understanding of search results. Relevance definition. Making the report according to the requirements
Topic 1-2. Task 2	Table data processing using dictionary tables. Building the table containing data from other tables effectively
Topic 3-4. Task 3	Table data filtration and visualization. Data sorting. Filtration of data using filter and advanced filter. Pivot tables and charts
Topic 5. Task 4	Building of short simple webpage with HTML. Creation of webtables
Topic 6. Task 5	Design and development of the simple database, filling it with data, writing queries to get information

The list of self-studies in the course is given in Table 3.

<div align="right">Table 3</div>

<div align="center">**List of self-studies**</div>

Name of the topic and/or task	Content
Topic 1 - 6	Studying lecture material
Topic 1 - 6	Preparation for laboratory work
Topic 1 – 6	Work on the individual tasks

The number of hours of lectures, laboratory studies, and hours of self-study is given is given in the technological card of the course.

TEACHING METHODS

In the process of teaching an educational discipline, in order to acquire certain learning outcomes, to activate the educational process, it is envisaged to use such learning methods as:

- verbal (lectures on all topics), elements of problematic lectures (on all topics of the course);

- visual (demonstrations are included in all lecture and practical materials);

- practical (laboratory classes on all topics of the course). In the conditions of the mixed form of education, the presentation of lecture material and/or the conduct of laboratory classes and group and individual consultations takes place using the Zoom platform, in the conditions of the usual classroom form, the classes are held face-to-face, in classrooms and computer rooms.

FORMS AND METHODS OF ASSESSMENT

The University uses a 100-point cumulative system for assessing the learning outcomes of students.

Current control is carried out during lectures, laboratory classes and is aimed at checking the level of readiness of the student to perform a specific job and is evaluated by the amount of points scored:

− for courses with a form of semester control as grading: maximum amount is 100 points; minimum amount required is 60 points.

The final control includes current control and assessment of the student.

Semester control is carried out in the form of a grading.

The final grade in the course is determined:

− for disciplines with a form of grading, the final grade is the amount of all points received during the current control.

During the teaching of the course, the following control measures are used:

Current control: laboratory works (60 points), written control works (20 points), tests for current work (20 points).

Semester control: Grading.

More detailed information on the assessment system is provided in technological card of the course.

RECOMMENDED LITERATURE

Main

1. Інформатика в сфері комунікацій [Електронний ресурс]: навчально-практичний посібник: у 3-х ч. Частина 2: Обробка та аналіз даних / С. Г. Удовенко, О. В. Тесленко, Н. О. Бринза [та ін.]; за заг. ред. С. Г. Удовенка; Харківський національний економічний університет ім. С. Кузнеця. - Електрон. текстові дан. – Харків : ХНЕУ ім. С. Кузнеця, 2019. – 249 с. – [Електронний ресурс]. – Режим доступу: http://repository.hneu.edu.ua/handle/123456789/23347

2. Інформатика в сфері комунікацій [Електронний ресурс]: навч.-практ. посіб.: у 3-х ч. Ч. 3: Використання web-технологій у сфері комунікацій / С. Г. Удовенко, В. А. Затхей, О. В. Гороховатський [та ін.] ; за заг. ред. С. Г. Удовенка; Харківський національний економічний університет ім. С. Кузнеця. - Електрон. текстові дан. (10.5 МБ). – Харків : ХНЕУ ім. С. Кузнеця, 2020. – 154 с. – [Електронний ресурс]. – Режим доступу: http://repository.hneu.edu.ua/handle/123456789/24506

3. Microsoft Excel 365 Bible / M. Alexander, D. Kusleika – Wiley, 2022. – 1072 p.

Additional

4. Microsoft Word 2019 Step by Step / J. Lambert. – Pearson Education, 2019. – 672 p.

5. Murach's HTML and CSS, fifth edition / Z. Ruvalcaba, A. Boehm. – Mike Murach and Associates Inc, 2021. – 580 p.

Information resources

6. Informatics (1 year of study 2024/2025, spec. 075.010), assoc. prof. O. Gorokhovatskyi – [Electronic resource]. – Access mode: https://pns.hneu.edu.ua/course/view.php?id=11675

7. Excel video training. – [Electronic resource]. – Access mode: https://support.microsoft.com/en-us/office/excel-video-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb