



## Syllabus Course Program



# GDP 5 Digital technologies in marketing

### Specialty

075 – Marketing

### Institute

Institute of Economics, Management and International Business

### Educational program

Marketing

### Department

Marketing (201)

### Level of education

Master's level

### Course type

Free choice of specialized training

### Semester

2

### Language of instruction

English

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## Lecturers and course developers



### Mariia Litvynenko

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Candidate of technical sciences, associate professor, associate professor of the Department of Marketing

Author and co-author of more than 110 scientific and educational works. Courses: "Economic informatics", "Forecasting socio-economic processes", "CRM systems", "Business information security", "Marketing activity management".

[More about the lecturer on the department's website](#)

## General information

### Summary

Digitization of all aspects of modern life significantly affects the change in the structure of markets, patterns of consumer behavior and a dramatic change in business processes, especially in the field of marketing activities. That is why the discipline "Digital technologies in marketing" is one of the keys to the formation of theoretical knowledge and practical work skills in the conditions of rapid changes in the market environment, and enables the formation of competencies that are critically necessary in the conditions of the current state of economic development.

### Course objectives and goals

The goal is the formation of a modern level of information culture, the acquisition of practical work skills to perform information processes with the help of computer tools when solving various problems in practical activities in the field of marketing.

### Format of classes

Lectures, laboratory work, consultations, Individual assignment – calculation and graphic task. Final control in the form of an test.

## Competencies

ZK1. Ability to make informed decisions.

ZK6. Ability to search, process and analyze information from various sources.

SK2. The ability to correctly interpret the results of the latest theoretical research in the field of marketing and the practice of their application.

SK8. The ability to form a market entity's marketing system and evaluate the effectiveness and efficiency of its functioning.

## Learning outcomes

P9. Understand the essence and features of using marketing tools in the process of making marketing decisions.

P15. Collect the necessary data from various sources, process and analyze their results using modern methods and specialized software.

## Student workload

The total volume of the course is 150 hours (5 ECTS credits): lectures - 32 hours, laboratory work - 32 hours, self-study - 86 hours.

## Course prerequisites

Education level bachelor.

## Features of the course, teaching and learning methods, and technologies

Lectures are conducted using multimedia tools (Microsoft Teams), presentations and supporting notes. In the laboratory classes, modern software products for managing marketing activities are considered, information technologies for solving the problems of product marketing research are analyzed, and reports are heard on issues that are submitted for independent study. Current control: conducting tests for 15-20 minutes to assess students' understanding of the lecture material. Educational materials (lecture notes and laboratory work) are provided using presentation materials and multimedia tools.

## Program of the course

### Topics of the lectures

#### Topic 1. Introduction to Digital and Social Media Marketing

The essence of digital marketing. The history of the development of digital marketing. The relationship and combination of marketing channels and digital marketing. Social media marketing. Internet marketing and digital marketing. common, different, interchangeable. Peculiarities of the Internet audience of Ukraine.

#### Topic 2. Digital marketing audit

Product in digital marketing. Product and target audience analysis. Features of pricing policy in digital marketing. Digital channels and promotion tools. Digital marketing in the company's sales system. Analysis of competitors. Positioning. The concept of a web analyst. Web analytics methods and tools. Practice of working with Google Analytics, drawing up reports in Google Analytics.

#### Topic 3. The main principles of creating and using digital technologies at the enterprise in the marketing subsystem

Principles of creation and operation of digital information systems (DIS) at the enterprise. Organization of work on the creation of CIS. Stages and stages of creation of CIS: stage of the technical task; stage of technical, operational design; the stage of implementation of the digital system; Formulation of the problem; problem solving algorithm.

#### Topic 4. Analysis of inventory using MS Excel

Creating and filling in the "Initial state of TMZ" table worksheet. Creation and completion of the "Sales of TMZ" worksheet. Creating an Exact Price Method worksheet. Applying array formulas on the Exact Price



Method worksheet. Analysis of the results of applying the exact price method. Creating an Average Price Method worksheet. Using array formulas on the Average Price Method worksheet.

#### **Topic 5. Technological means of support for making marketing decisions**

Means of graphic analysis of marketing data. Analysis of lists. Summary tables. Organization of marketing research using computer information processing technologies.

#### **Topic 6. Modern software products for managing marketing activities**

Using corporate information systems to solve marketing management problems. Concept of MRP II (Material Resource Planning). Use of specialized software products to solve marketing management problems. Automation of marketing research.

#### **Topic 7. Information technology for solving problems of product marketing research**

General characteristics of product marketing research. Information base of the product marketing research subsystem. The composition of the functional subsystem. Automation of solving tasks on the analysis of competitiveness of products (goods, services). Automation of solving problems of optimization of the assortment plan of production.

### **Topics of the workshops**

Conducting workshops is not provided for in the curriculum

### **Topics of the laboratory classes**

#### **Topic 1. Introduction to Digital and Social Media Marketing**

Discussion of key trends in industries formed under the influence of digital technologies. Students are invited to consolidate the topic with the help of control questions (online test).

#### **Topic 2. Digital marketing audit**

The purpose of the lesson is to gain skills in planning an advertising company using MS Excel: setting a problem, building a mathematical model of the problem, determining the expected profit for the 3rd, 2nd and 1st week. Explanation of the use of built-in functions of MS Excel. Analysis of the obtained results.

#### **Topic 3. The main principles of creating and using digital technologies at the enterprise in the marketing subsystem**

Case "Competitor analysis". Analysis of changes in the structure of traffic and competitors. Students are invited to consolidate the topic with the help of control questions (online test).

#### **Topic 4. Analysis of inventory using MS Excel**

Purpose of the lesson – Analysis of commodity and material stocks using MS Excel (technology of array formulas).

#### **Topic 5. Technological means of support for making marketing decisions**

The purpose of the lesson is to determine the price of products using a non-linear model and the "Solution Search" tool in MS Excel. Formulation of the problem. Development of a non-linear model of price determination. Implementation of the problem solution model using the "Solution Search" tool in MS Excel.

#### **Topic 6. Modern software products for managing marketing activities**

The purpose of the lesson is to use MS Access DBMS tools to automate marketing research tasks: development of the problem statement, physical implementation of the database.

#### **Topic 7. Information technology for solving problems of product marketing research**

The purpose of the lesson is to calculate ROI from the implementation of a customer relationship management system.

### **Self-study**

The course involves the implementation of an individual task in the form of a calculation and graphic task. In the course of the calculation task, it is necessary to provide a general description and analyze the activity of the enterprise under investigation. Investigate the component architecture of the CRM system used at the enterprise. To carry out a comparative analysis of the functionality of the most popular software products of CRM systems in Ukraine. Propose appropriate measures to improve the functionality of the CRM system in use and calculate the projected economic effect of the implementation of the CRM system.



## Course materials and recommended reading

- Виноградова О. В. Сучасні види маркетингу: навч. посіб. Київ: ДУТ, 2019. 265 с.
2. Воронюк А., Полицук А. Актуальний Інтернет-маркетинг. Київ: Агенство «Іріо», 2018. 160 с.
3. Летуновська Н.С., Хоменко Л.М., Люльов О.В. та ін. Маркетинг у цифровому середовищі: підручник. Суми: Сумський державний університет, 2021. 259 с.
- Оксанич А. П., Петренко В. Р., Костенко О. П. Інформаційні системи і технології маркетингу. Київ: «Видавничий дім «Професіонал». 2018. 320 с.
4. Пінчук Н. С., Галузинський Г. П. Інформаційні системи і технології в маркетингу: навч.посібник. Київ: КНЕУ. 2016. 328 с.
5. Танасійчук А.М., Поліщук І.І., Громова О.С., Бондаренко В.М., Гевчук А.В., Поліщук Н.В. Маркетинг: Навчальний посібник. Вінниця: ТОВ «Меркьюрі-Поділля», 2019. 292 с.
6. Ivanov M. M., Terentieva N. V. Methodology of building marketing systems. Bulletin of Zaporizhzhia National University. Economic Sciences. No. 2 (46), 2020. P. 116-121.
7. Ivanov M.M. Analysis and classification of the Marketing 4.0 system. Bulletin of Zaporizhzhia National University. Economic sciences. 2021. 1 (49), P.118-122. (DOI <https://doi.org/10.26661/2414-0287-2021-1-49-22>).
8. Dave Chaffey PR Smith Digital marketing excellence. Planning, optimizing and integrating online marketing. //Routledge. Taylor&Francis group. – 2017 – 1035 p.
9. Гіпер цикл Гартнера для цифрового маркетингу та реклами за 2019 рік [Електронний ресурс] – Режим доступу до ресурсу:  
<https://www.gartner.com/en/marketing/insights/articles/6-technologies-ongartner-hype-cycle-for-digital-marketing-and-advertising-2019>.

## Assessment and grading

### Criteria for assessment of student performance, and the final score structure

100% final assessment in the form of credit (20%) and current assessment (80%)  
Credit (testing) – 20 points  
Current rating:  
Calculation and graphic task - 30 points  
20 points - assessment of tasks in practical classes;  
30 points - current controls in practical classes

### Grading scale

Total points	National	ECTS
90–100	Excellent	A
82–89	Good	B
75–81	Good	C
64–74	Satisfactory	D
60–63	Satisfactory	E
35–59	Unsatisfactory (requires additional learning)	FX
1–34	Unsatisfactory (requires repetition of the course)	F

## Norms of academic integrity and course policy

The student must adhere to the Code of Ethics of Academic Relations and Integrity of NTU "KhPI": to demonstrate discipline, good manners, kindness, honesty, and responsibility. Conflict situations should be openly discussed in academic groups with a lecturer, and if it is impossible to resolve the conflict, they should be brought to the attention of the Institute's management.

Regulatory and legal documents related to the implementation of the principles of academic integrity at NTU "KhPI" are available on the website:

<http://blogs.kpi.kharkov.ua/v2/nv/akademichna-dobrochesnist/>



## Approval

Approved by

28.08.2023



Head of the department  
Diana RAIKO

28.08.2023



Guarantor of the educational  
program  
Oleksandra KOSENKO

