



Syllabus Course Program



Modern Digital Technologies for Business Process Management in the Hospitality Industry

Specialty

241 – Hotel and Restaurant Business

Educational program

Hotel and Restaurant Business

Level of education

Master's level

Semester

1

Institute

Institute of Education and Science in Economics,
Management and International Business

Department

Tourism and Hospitality Business (203)

Course type

General, Mandatory

Language of instruction

English

Lecturers and course developers

**Tatiana Chaika**

tetiana.chaika@khpi.edu.ua

PhD in Economic Sciences, Associate Professor, Associate Professor of the
Department of Tourism and Hospitality Business

Tatiana Chaika has authored or co-authored more than 90 scientific publications. She has more than 24 years of academic experience. She teaches courses in Modern Digital Technologies for Business Management in the Hospitality Industry, Event Management & Event Tourism, Startup Management in the Hospitality industry, IT products in the Hospitality industry.

More about the lecturer on the department's website:

<https://web.kpi.kharkov.ua/tourism/dotsent-chaika-tetyana-yuriyivna/>

General information

Summary

The course covers a wide range of issues related to the implementation of various applications of digital technology in the hospitality industry. Students are introduced to the opportunities for improving the business processes of the hospitality industry in the digital age. Particular emphasis is given to the role of digital transformation in enabling innovative changes in restaurant and hotel business processes.

Course objectives and goals

The aim of the course is to develop competencies related to the management of hotel and restaurant business in the digital era. Particular attention is paid to competencies related to the skills of using information and communication technologies, the ability to identify new opportunities and trends in hospitality development. The course also emphasizes the development of competencies related to the ability to communicate in foreign languages and to work successfully in an international multicultural environment.

Format of classes

Lectures, workshops, consultations, student's independent work. Final control in the form of a grading.

Competencies

GC02. The ability to search, process and analyze information from various sources.

GC03. The ability to analyze, evaluate, synthesize, generate new ideas.

GC05. The ability to use information and communication technologies.

GC07. The ability to make informed decisions.

SG05. The ability to create effective service, commercial, production, marketing, and economic activities of hotel and restaurant business entities.

SG11. The ability to independently acquire new knowledge, use innovative technologies in the field of hotel and restaurant business

SG12. The ability to integrate knowledge and solve complex problems of the hotel and restaurant business in multidisciplinary context, in new or unfamiliar environments in the presence of incomplete or limited information.

Learning outcomes

LO02. To communicate freely orally and in writing in Ukrainian and English when discussing professional issues, research and innovations in the field of hotel and restaurant business.

LO06. To search for necessary data in scientific literature, databases and other sources, analyze and evaluate these data, systematize and organize information to solve complex tasks of professional activity/

LO07. To investigate development models of international and national hotel and restaurant chains (corporations).

LO08. To initiate, develop and manage projects for the development of subjects of the hotel and restaurant industry, taking into account information, material, financial and personnel support.

LO09. To apply specialized software to solve problems of management of main and auxiliary processes of hotel and restaurant business entities.

Student workload

The total volume of the course is 120 hours (4 ECTS credits): lectures - 32 hours, workshops - 16 hours, independent work - 72 hours.

Course prerequisites

This is the initial course for this level of higher education and requires knowledge of information technology at the bachelor's level.

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

Interactive lectures with presentations, workshops, discussions, individual and team work, research work, work with literature and information sources, problem-based learning.

Program of the course

Topics of the lectures

Topic 1. Concept and types of business processes.

Definition and key attributes of business processes. Types of business processes. Basic elements of a business process. Examples of business processes in hotels and restaurants.

Topic 2. The role of digital technologies in business process administration.

Levels of the digitalization process (digitization, digitalization, digital transformation). Levels of application of digital technologies in hotel and restaurant business establishments. Evolutionary development of the digitalization process in the hotel and restaurant industry.

Topic 3. Brief overview of leading digital technologies.

Cloud technologies in the hospitality industry. Business analytics and decision making based on Big Data. Internet of things (IoT) and integrated services. Artificial intelligence (AI) in the hospitality industry. Recognition technologies, chatbots, service robots. Virtual reality (VR) and augmented reality (AR) in the hospitality industry. Distributed ledger technology and blockchain in the hospitality industry.

Topic 4. Business Process Description. BPMN Notation.

Ways to describe a business process. Block diagram. Business process mapping. Notation. Business process development tools. Basic BPMN notation objects. Bizagi business process designer.

Topic 5. Business Process Management Systems (BPMS).

Business Process Management (BPM) as a structured approach to improving business processes in an organization. BPM software products. Business Process Management System (BPMS). Non-executable and executable business processes. BPM methods aimed at improving business processes. Levels of business process modeling. Business process maturity scale.

Topic 6. Digital transformation of business processes in the hotel and restaurant industry.

Levels of integration of digital technologies in the hospitality industry. Main implementations of digital technologies at the guest services level. Main implementations of digital technologies at the managerial and operational level.

Topic 7. Key trends in the transformation of the hospitality industry in the digital era.

Features of the hospitality industry in the context of digital transformation. Key issues of using digital technologies in the hospitality industry. Classic concept of innovation cycles. Elements of the business model and digital technologies that can have a significant impact on the transformation of the corresponding element of the business model of a hotel and restaurant business.

Topics of the workshops

Topic 1. Concept and types of business processes.

Definition and key attributes of business processes. Types of business processes. Basic elements of a business process. Examples of business processes in hotels and restaurants.

Topic 2. The role of digital technologies in business process administration.

Levels of the digitalization process (digitization, digitalization, digital transformation). Levels of application of digital technologies in hotel and restaurant business establishments. Evolutionary development of the digitalization process in the hotel and restaurant industry.

Topic 3. Brief overview of leading digital technologies.

Cloud technologies in the hospitality industry. Business analytics and decision making based on Big Data. Internet of things (IoT) and integrated services. Artificial intelligence (AI) in the hospitality industry. Recognition technologies, chatbots, service robots. Virtual reality (VR) and augmented reality (AR) in the hospitality industry. Distributed ledger technology and blockchain in the hospitality industry.

Topic 4. Business Process Description. BPMN Notation.

Ways to describe a business process. Block diagram. Business process mapping. Notation. Business process development tools. Basic BPMN notation objects. Bizagi business process designer.

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Topic 6. Digital transformation of business processes in the hotel and restaurant industry.

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Topic 7. Key trends in the transformation of the hospitality industry in the digital era.

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Topics of the laboratory classes

no laboratory classes.

Self-study

The course involves the completion of an individual calculation assignment. Students are also recommended additional materials (videos, articles) for independent study and analysis.

Course materials and recommended reading

Compulsory.

1. Готельно-ресторанний бізнес : навч. посібн. для здобувачів освіти спеціальності 241 «Готельно-ресторанна справа» другого (магістерського) рівня освіти / колектив авторів ; за ред. проф. Н.В.Якименко-Терещенко ; Нац. техн. ун-т «Харків. політехн. ін-т». Харків, 2024. 365 с. Розділ 7. Сучасні digital-технології в управлінні бізнес-процесами закладів готельно-ресторанного бізнесу.
2. Lecture summary on the discipline Modern Digital Technologies for Business Process Management in the Hospitality Industry for students of specialty 241 "Hotel and restaurant business" of the second (master's) level of education of all forms of education / compiled by T. Chaika. Kharkiv: NTU "KhPI", 2024. 57 p.
3. Modern digital technologies for business process management in the hospitality industry: Guideline for practical lessons for students of specialty 241 "Hotel and restaurant business" of the second (master's) level of higher education of all forms of education / compiled by. N. Yakymenko - Tereshchenko, T. Chaika. Kharkiv: NTU "KHPI", 2024. 33 p .
4. Modern digital technologies for business process management in the hospitality industry: Guideline for self-study for students of specialty 241 "Hotel and restaurant business" of the second (master's) level of higher education of all forms of education / compiled by. N. Yakymenko -Tereshchenko, T. Chaika. Kharkiv: NTU "KHPI", 2024.12 p .
5. Guidelines for performing the calculation task on the discipline Modern Digital Technologies for Business Process Management in the Hospitality Industry for students of the second (master's) level of education of all forms of study / compiled by T. Chaika. Kharkiv: NTU "KhPI", 2024. 22 p.

Recommended.

1. Крижановський Є. М., Яшолт А. Р., Жуков С. О., Козачко О. М. Моделювання бізнес-процесів та управління ІТ-проектами: навчальний посібник. Вінниця: ВНТУ, 2018. URL: <http://www.dut.edu.ua/ru/lib/1/category/739/view/2150>
2. Якименко-Терещенко Н. В., Чайка Т. Ю., Маслюк Ю. В. Віртуальні гіді в гастрономічному туризмі: перспективи розробки та впровадження. Проблеми сучасних трансформацій. Серія: економіка та управління. 2024. №11. DOI: <https://doi.org/10.54929/2786-5738-2024-11-03-05>
3. Bloomberg J. Digitization, Digitalization, And Digital Transformation: Confuse Them At Your Peril. Forbes. 2018. 29 apr. URL : <https://www.forbes.com/sites/jasonbloomberg/2018/04/29/digitization-digitalization-and-digital-transformation-confuse-them-at-your-peril/?sh=1b7f46732f2c>
4. Kajanan T., Methiny S., KirujanY., M.F.I.M Rilfhy Hotel Management System Research Report. Sri Lanka Institute of Information Technology. 2021. 93 p.
5. Oliinyk O., Krasovskiy S., Vasylenko O., Prykhod'ko R., Pliuta O., Tonkykh O. Digitalization of Business Processes in the Hospitality Industry. Economic Affairs. 2022. Vol. 67. No. 04. P. 725-733. DOI: <https://doi.org/10.46852/0424-2513.4s.2022.6>
8. Ristova C., Dimitrov N. Digitalization in the hospitality industry: trends that might shape the next stay of guests. International Journal of Information, Business and Management. 2019. Vol. 11. No. 3. P. 144-154.
9. Shwetzter C., Maritz A., Nguyen Q. Entrepreneurial ecosystems: a holistic and dynamic approach. Journal of Industry - University Collaboration. 2019. Vol. 1 No. 2. P. 79-95. DOI: <https://doi.org/10.1108/JIUC-03-2019-0007>
10. Troisi O., Visvizi A., Grimaldi M. Digitalizing business models in hospitality ecosystems: toward data-driven innovation. European Journal of Innovation Management. 2023. Vol. 26. Iss. 7. URL: <https://www.emerald.com/insight/publication/issn/1460-1060>
11. Zhu, J., Wang, Y., Cheng, M. (2021). Digital Transformation in the Hospitality Industry. Boston Hospitality Review, 10. URL: https://www.bu.edu/bhr/files/2021/10/BHR_Zhu-et-al_Digital-Transformation_OCT.21.docx.pdf
- 12 . Якименко-Терещенко Н. В., Чайка Т. Ю., Яріко М. О. Квест-екскурсії з віртуальним гідом як інноваційні події продукти індустрії туризму та гостинності. Інновації та технології в сфері послуг і харчування. 2023. Т. 1. № 7. С.42-47.

Assessment and grading

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

Criteria for evaluating student performance and distribution of points

Type of work	Number of points
Practices	40
Individual report	30
Current control 1	15
Current control	15
Total	100

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

29.08.2024 p.



Head of the department
Natalia YAKIMENKO-TERESCHENKO

29.08.2024 p.



Guarantor of the educational program
Natalia YAKIMENKO-TERESCHENKO