

APPROVED

Rector of the educational establishment "Belarusian State
Economic University"


_____ V. Yu. Shutilin.

“ 28 06 _____ 2019

Registration number 3923-19 CA / Account.

Intelligent data analysis in Marketing

The study program of higher education institutions for the academic discipline on
specialties 1-26 80 05 "Marketing"

COMPLITED BY:

Akulich IL, Head of Marketing Department of Education Institution "Belarusian State Economic University", Doctor of Economics, professor.

Golik V.S., associate professor of the marketing department of the educational institution "Belarusian State Economic University", candidate of economic sciences, associate professor.

REVIEW:

Ponomareva NP, Associate Professor, Department of Economics and Management, Institute of Business, BSU, Candidate of Economic Sciences, Associate Professor.

Bondarenko G.A., associate professor of the department of commercial activity and real estate market of the higher education institution "Belarusian State Economic University", candidate of economic sciences, associate professor.

RECOMMENDED FOR ADOPTION:

Department of Marketing Education "Belarusian State Economic University"
(Protocol number from "¹⁰14" 05, 2019);

Scientific and Methodological Council of the educational establishment
"Belarusian State Economic University"
(Protocol number from "⁶25" 06, 2019).

Explanatory note

The purpose of teaching the discipline: to study the marketing information system of the organization and to instill in undergraduates the knowledge and skills in the field of marketing methodology and their use in the practical activities of enterprises.

In this context, the discipline "Intellectual data analysis in marketing" is one of the main, forming the necessary professional knowledge in the field of marketing for undergraduates. Her study gives undergraduates the necessary knowledge about the use of data in the marketing activities of enterprises.

The key objectives of the discipline to explore: elements of a marketing information system, the use of Internet technologies in marketing, software for data analysis in marketing.

The subject of the discipline "Intelligent data analysis in marketing" is the definition of information support for marketing decisions for the formation and management of a marketing information system.

Undergraduates should have an idea about the problems and prospects in this field of activity.

The logic of the discipline is based on the study and practical use of analytical procedures that ensure the market orientation of the enterprise in international competition.

The discipline "Intellectual data analysis in marketing" is based on knowledge of the basics of marketing, management, higher mathematics and information technology.

As a result of studying the discipline "Intellectual data analysis in marketing", the following competencies are formed: to be able to carry out data analysis to solve economic, managerial, and research tasks (UPK-5).

As a result of studying the discipline, the undergraduate must:

know the content of marketing information support;

be able to use the knowledge gained in practical marketing activities;

possess the skills of research work in this area to develop the ability to implement innovative methods and approaches in the practice of enterprises.

Form of education full-time. In total, there are 100 hours in the discipline, out of which there are 44 classroom hours, including 22 hours - lectures, 22 laboratory lessons.

The form of education is by correspondence. There are 100 hours in total in the discipline, of which only 10 hours are classroom hours - 10, including 4 hours - lectures, laboratory classes - 6.

Form of control - offset.

CONTENTS OF EDUCATIONAL MATERIAL

Topic 1. Methodological foundations of data mining in marketing

The essence of data mining in marketing. Data mining concepts. Analysis of data related to the activities of the enterprise. Intelligent analysis of customer related data. The use of data mining in marketing management.

Topic 2. Methods and technologies of data mining in marketing

Data mining methods. Association. Classification. Neural networks. Fuzzy logic. Clustering Prediction Sequential models. Decision trees Combinations Processing with filling.

The remaining steps of the data mining process in marketing. Data analysis tools. Application analysis of data in marketing.

Topic 3. Database Intelligence

Information support for making marketing decisions. Database. Formation of databases. The main stages of database mining. Selection of data. Cleaning up Enrichment (adding information). Coding. Detection and extraction of knowledge. Message.

Marketing activities based on database mining (Database marketing).

Topic 4. Mathematical and data mining software in marketing

The essence of data mining software in marketing. Main software products. Data mining. Data mining technologies. Application software Data Mining. The use of Data Mining for solving marketing problems. Using Data Mining in Customer Relationship Management with CRM (Customer Relationship Management).

**Educational and methodical map of the academic discipline
for the specialty 1-26 80 05 "Marketing"
Profile "Event Marketing"
(full-time higher education)**

| Section number, topics, classes | Section title, theme | The number of class hours | | | | | Other | Form of control knowledge | |
|------------------------------------|--|---------------------------|-----------|-----------------|--------------------|--|-----------|--|--------------------------|
| | | Lectures | Workshops | Seminar classes | Laboratory classes | Guided independent work of students | | | |
| | | | | | | Lectures | | | Workshop s |
| 1. | Methodical foundations of data mining in marketing | 4 | | | 4 | 2 | 2 | Presentation Power Point [1-13] | |
| 2. | Methods and technologies of data mining in marketing | 2 | | | 2 | 2 | 2 | Presentation Power Point Market situation [1-13] | Laboratory protection |
| 3. | Database Intelligence | 4 | | | 4 | 2 | 2 | PresentationPo wer Point Market situation [1-13] | |
| 4. | Mathematical and Data Mining Software in Marketing | 2 | | | 2 | 4 | 4 | PresentationPo wer Point Market situation [1-13] | Laboratory protection |
| | Total | 12 | | | 12 | 10 | 10 | | Credit |

**Educational and methodical map of the academic discipline
for the specialty 1-26 80 05 "Marketing"
Profile "Event Marketing"
(extramural studies)**

| Section number, topics, classes | Section title, theme | The number of class hours | | | | | Other | Form of control knowledge |
|------------------------------------|--|---------------------------|-----------|-----------------|--------------------|--|--|------------------------------|
| | | Lectures | Workshops | Seminar classes | Laboratory classes | Guided independent work of students | | |
| 1. | Methodical foundations of data mining in marketing | 2 | | | 2 | | Presentation Power Point [1-13] | |
| 2. | Methods and technologies of data mining in marketing | 0 | | | 2 | | Presentation Power Point Market situation [1-13] | Laboratory protection |
| 3. | Database Intelligence | 0 | | | 2 | | PresentationPow er Point Market situation [1-13] | |
| 4. | Mathematical and Data Mining Software in Marketing | 2 | | | 0 | | PresentationPow er Point Market situation [1-13] | Laboratory protection |
| | Total | 4 | | | 6 | | | Credit |

**Educational and methodical map of the academic discipline
for the specialty 1-26 80 05 "Marketing"
Professionals "International Marketing" and "Marketing in Business"
(full-time higher education)**

| Section number, topics, classes | Section title, theme | The number of class hours | | | | | Other | Form of control knowledge | |
|---------------------------------|--|---------------------------|-----------|-----------------|--------------------|-------------------------------------|-------|--|-----------------------|
| | | Lectures | Workshops | Seminar classes | Laboratory classes | Guided independent work of students | | | |
| | | | | | | Lectures | | | Workshops |
| 1. | Methodical foundations of data mining in marketing | 6 | | | 2 | | | Presentation Power Point [1-13] | |
| 2. | Methods and technologies of data mining in marketing | 4 | | | 4 | | | Presentation Power Point Market situation [1-13] | Laboratory protection |
| 3. | Database Intelligence | 6 | | | 6 | | | Presentation Power Point Market situation [1-13] | |
| 4. | Mathematical and Data Mining Software in Marketing | 6 | | | 10 | | | Presentation Power Point Market situation [1-13] | Laboratory protection |
| | Total | 22 | | | 22 | | | | Credit |

**Educational and methodical map of the academic discipline
for the specialty 1-26 80 05 "Marketing"
Professionals "International Marketing" and "Marketing in Business"
(extramural studies)**

| Section number, topics, classes | Section title, theme | The number of class hours | | | | | Other | Form of control knowledge |
|------------------------------------|--|---------------------------|-----------|-----------------|--------------------|--|--|------------------------------|
| | | Lectures | Workshops | Seminar classes | Laboratory classes | Guided independent work of students | | |
| 1. | Methodical foundations of data mining in marketing | 1 | | | | | Presentation Power Point [1-13] | |
| 2. | Methods and technologies of data mining in marketing | 1 | | | | | Presentation Power Point Market situation [1-13] | Laboratory protection |
| 3. | Database Intelligence | 1 | | | 3 | | PresentationPow er Point Market situation [1-13] | |
| 4. | Mathematical and Data Mining Software in Marketing | 1 | | | 3 | | PresentationPow er Point Market situation [1-13] | Laboratory protection |
| | Total | 4 | | | 6 | | | Credit |

GUIDELINES FOR THE STUDY OF DISCIPLINE

The acquisition of knowledge of the discipline is an important stage of independent work of students. Recommended budget time for independent work on average 2-2.5 hours on 2 class hours.

The main areas of students' independent work are:

- initially a detailed introduction to the program of the discipline;
- familiarization with the list of recommended books on the subject as a whole and its divisions, its presence in the library and other available sources, the study of relevant literature on the subject, the selection of secondary literature;
- exploring and expanding teacher lecture material at the expense of special literature, consultations;
- preparation for practical and seminars on specially developed plans with the study of basic and additional literature;
- preparation for the implementation of diagnostic monitoring forms (tests, colloquiums, tests, etc.);
- work on the implementation of the abstracts;
- preparation for tests.

LITERATURE**Primary:**

1. Kotler, F., Keller, K. Marketing management / F. Kotler, K. Keller. - St. Petersburg: Peter, 2018. - 848 p.
2. Akulich, I.L. Relationship Marketing / I.L. Akulich. - Minsk: Higher School, 2010. - 256 p.

Additional:

3. Akulich, I.L. Basics of marketing / I.L. Akulich. - Minsk: BSEU, 2015. - 538 p.
4. Golik, V.S. Web marketing: an educational complex for the specialty 1-26 81 05 "Marketing" / V.S. Golik. - Minsk: BSU, 2017. - 59 p.
5. Polishchuk, AV, Voronyuk, A. Actual Internet Marketing / A.V. Polishchuk, A. Voronyuk. - Kiev: IPIO, 2018. - 180 p.
6. Prokhorov, N., Sidorin, D. Reputation management on the Internet / N. Prokhorov, D. Sidorin. - M.: Synergy University Publishing House, 2017. - 160 p.
7. Danchenok, L. Social Media Marketing. Internet marketing communications / L. Danchenok. - SPb: Peter, 2013. - 288 p.
8. Golubkov, E.P. Technology management decision making / E.P. Golubkov. - M.: Business and Service, 2005. - 544 p.
9. Larichev, O.I. Theory and methods of decision making. / OI Larichev. - M.: University. book, Logos, 2006. - 392 p.
10. Mkhitarian, S.V. Industry marketing / S.V. Mkhitarian. - M.: Eksmo, 2006. - 368 p.

Протокол согласования учебной программы по изучаемой учебной дисциплине с другими дисциплинами специальности

| Название учебной дисциплины, с которой требуется согласование | Название кафедры | Предложения об изменениях в содержании учебной программы учреждения высшего образования по учебной дисциплине | Решение, принятое кафедрой, разработавшей учебную программу (с указанием даты и номера протокола) |
|---|--|---|---|
| <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> |
| Национальная экономика Беларуси | национальной экономики и государственного управления | Замечаний нет | протокол № 10 от 14.05.2019 г. |

ДОПОЛНЕНИЯ И ИЗМЕНЕНИЯ К УЧЕБНОЙ ПРОГРАММЕ УВО

на ____ / ____ учебный год

| № п/п | Дополнения и изменения | Основание |
|----------|------------------------|-----------|
| | | |

Учебная программа пересмотрена и одобрена на заседании кафедры

_____ (название кафедры) (протокол № ____ от _____ 2019 г.)

Заведующий кафедрой

д.э.н., профессор

И.Л. Акулич

УТВЕРЖДАЮ

Директор Института магистерской подготовки

к.э.н, доцент

О.А. Морозевич