KHMELNYTSKYI NATIONAL UNIVERSITY

APPROVE
Dean of the Faculty of Information Technologies
Tetyana HOVORUSHCHENKO
Name SURNAME
"1" 09 2025

WORK PROGRAM OF THE ACADEMIC DISCIPLINE

Content management systems for web services
Name of discipline

Purpose of the Work Program	For educational programs of various specialties
Level of higher education	First (bachelor's)
Language of instruction	English
Volume of the discipline, ECTS credits	8
Discipline status	Selective
Faculty	Information technology
Chair	Computer Engineering and Information Systems

Form of education	Amount disciplines		Number of hours						Semester control form
			Classroom classes					Independent work (including IRS)	
	ECTS credits	Hours	Together	Lectures	Laboratory work	Practical classes	Seminar classes		pass\fail test
D	8	240	96	32	32	32	-	144	+

The work program is based on the educational programs of bachelor's training and the standard of higher education in the specialty.

The work program was compiled by _____ Doctor of Technical Sciences, Professor Yelyzaveta HNATCHUK
Signature of author(s) Academic degree, academic title Name SURNAME of author(s)

Approved at the meeting of the Department of Computer Engineering and Information Systems

Protocol of 18.08 2025 No. 1 Head of the Department _____ Olga PAVLOVA
Signature First name, Last name

The work program was reviewed and approved by the Academic Council of the Faculty of Information Technologies.

Head of the Academic Council of the Faculty _____ Tetyana HOVORUSHCHENKO
Signature First name, Last name

Khmelnytskyi 2025

3. Explanatory note

The discipline "Web Services Content Management Systems" belongs to the cycle of elective disciplines and contributes to the deepening of professional skills in the field of digital content management, planning and implementation of marketing strategies in social media. The discipline ensures the mastery of modern technologies of web development, content management and brand promotion on the network, and also forms practical skills in working with CMS platforms, SMM tools, analytics and reporting. In the process of studying, applicants acquire important social competencies (soft skills): effective communication, teamwork, critical thinking, the ability to make decisions in conditions of limited resources and develop project competencies.

Purpose of discipline. Formation of competencies in the field of creation, management and promotion of digital content; the ability to effectively use CMS platforms and SMM tools; the ability to analyze the results of marketing campaigns and make informed management decisions in the field of web services.

Subject of the discipline.Using modern web content management systems and social media tools to create and maintain web content, plan and implement SMM campaigns, analyze content effectiveness, and interact with the audience.

Discipline objectives. Formation of practical skills in creating and editing content on CMS platforms; mastering SMM tools for promoting brands, increasing audience engagement, and working with targeted advertising; familiarization with methods of analytics and evaluating the effectiveness of content and marketing campaigns; development of critical and analytical thinking, the ability to work in a team, make management decisions, and plan work with digital services.

Learning outcomes. After studying the discipline, the student must: know the basic principles of CMS systems and their application for web content management; possess basic tools for creating, editing and organizing content on websites; be able to plan, launch and evaluate the effectiveness of SMM campaigns, determine the target audience and customer segments; apply the acquired knowledge to design and implement digital marketing strategies; demonstrate the ability to work with analytics, create reports and offer optimization solutions based on the data obtained; show initiative, the ability to self-study, effective communication, work in a team and make responsible management decisions in the field of web content and SMM.

4. Structure of credits of the discipline

Topic name	Number of hours allocated to:			
	Lectures	Practical work	Laboratory work	CRC
First semester				
Topic 1. Basic concepts	2			10
Topic 2.CMS architecture	2	4	4	10
Topic 3. Search engines	2			10
Topic 4. Comparative analysis of search engines	2	4	4	10
Topic 5. The importance of content when filling a site	2			10
Topic 6. The Instagram effect	2	4	4	10
Topic 7. Content marketing	2	4	4	14
Topic 8. Creating effective business content	2	4	4	14
Topic 9. Features of promotion in social networks	4	4	4	14
Topic 10. Typeand content for the site	4	4	4	14
Topic 11. Content on social networks Facebook	4	4	4	14
Topic 12. Content management systems	4			14
Hours:	32	32	32	144
Total:	**240 (8.0 credits)**			

5. Academic discipline program

5.1 Course content

No. n/a	List of lecture topics and their abstracts	Hours
1	**Lecture No. 1. Basic concepts** Content management system. CMS functions. Content management. Lit.: [1- 11]	2
2	**Lecture No. 2. CMS Architecture** CMS architecture. Editing module. Presentation module. Database for storing HTML text of web pages. Web page structure. Lit.: [1- 11]	2
3	**Lecture No. 3.**Search engines Search engines. Search engine trends. How search engines work. Lit.: [1- 11]	2
4	**Lecture No. 4.Comparative analysis of search engines** Comparative analysis of search engines. Site indexing budget. The role of content. Lit.: [1- 11]	2
5	**Lecture No. 5. The importance of content when filling a website** Unique content. Filling the site with content. Content managers. Video editors. Lit.: [1- 11]	2
6	**Lecture No. 6.The Instagram effect** Culture and trends. Internal company report. Subscribers. Security policy. Lit.: [1- 11]	2
7	**Lecture No. 7. Content Marketing** Additional audience. Brand promotion. User trust. Attracting traffic to the site. Increasing sales. In what form to prepare content. Practical application of content marketing. Why content marketing does not work. Disadvantages of content marketing. Examples of content marketing.	2

	Lit.: [1- 11]	
8	**Lecture No. 8. Creating effective business content** Audience activity peaks. Post length. Questions in comments. Call to action. Triggers. Bright photos and infographics. Rules for creating quality business content. Lit.: [1- 11]	2
9	**Lecture No. 9. Features of promotion in social networks** Proportions of use of content types. Frequency of publications in social networks. Choice of content type depending on social network. Lit.: [1- 11]	4
10	**Lecture #10. Types of content for the site** Content plan. Proportions of use of content types. Engaging content. Branded content. Educational content. Advertising content. Lit.: [1- 11]	4
11	**Lecture No. 11. Content in social networks Facebook** Culture and trends. Internal company report. Subscribers. Security policy. Paid, free advertising. Lit.: [1- 11]	4
12	**Lecture No. 12. Content management systems** CMS WordPress. Joomla. Drupal. Modx. OpenArt. Magento. Hostinger. Lit.: [1- 11]	4
	Total per semester:	**32**

5.2 Content of practical classes

No. n/a	Practical lesson topic	Hours
1	**Practical work No. 1. Strategy of work in social networks** SMM strategy. KPI. Own brand, service, product, personal page. Social networks, website. Parameters (number of subscribers, number of views, likes, conversions, etc.). Lit.: [1- 11]	4
2	**Practical work No. 2. CRI trackers** Creating, managing and analyzing KPIs. Choosing software for working with KPIs. Lit.: [1- 11]	4
3	**Practical work No. 3. SMM on Facebook** Facebook account. Facebook business page. Business categories. Create a username. Add brand information. Add a call to action button. Assign admins to your Facebook page. Delete a Facebook business page. Lit.: [1- 11]	4
4	**Practical work No. 4. Target audience** Target audience of the site. Types of target audience of the site. Portrait of the target audience. Errors in forming a client portrait. 5W method. Approaches to analyzing the B2B and B2C spheres. Lit.: [1- 11]	4
5	**Practical work No. 5. Tone of voice or brand of voice** Tone of voice, brand of voice. How ToV forms an image. Main features of clickbait. Advantages of using ToV. Classifications of ToV. Checklist. MailChimp method. Lit.: [1- 11]	4
6	**Practical work No. 6. Content for social networks** Types of content for social networks. Proportions for different types of content. Content for Facebook and Instagram pages. Content plan. Lit.: [1- 11]	4
7	**Practical work No. 7. SMM on Instagram** Instagram account. Instagram business page. Business categories. Create a username. Add brand information. Add a call-to-action button. Lit.: [1- 11]	4
8	**Practical work No. 8. Content management** Frequency of publishing content on social networks. What are the best times to publish content? Types of content depending on the social network. Lit.: [1- 11]	4
	Total:	**32**

5.3 Laboratory content

No. n/a	Laboratory lesson topic	Hours
1	**Laboratory work No. 1.**Creating content for online resources Lit.: [1- 11]	4
2	**Laboratory work No. 2.**Studying types of website builders Lit.: [1- 11]	4
3	**Laboratory work No. 3.**Basic tools for creating websites Lit.: [1- 11]	4
4	**Laboratory work No. 4.**Creating website pages Lit.: [1- 11]	4
5	**Laboratory work No. 5.**Study of the main types of computer graphics Lit.: [1- 11]	4
6	**Laboratory work No. 6.**Installing applications from external sources Lit.: [1- 11]	4
7	**Laboratory work No. 7.**Learning how Bootstrap, jQuery, and plugins work Lit.: [1- 11]	4
8	**Laboratory work No. 8.**Learning content management systems Lit.: [1- 11]	4
	Total:	**32**

5.3 Content of independent (including individual) work of a higher education student

Independent work of students of all forms of education consists in systematic study of program material from relevant sources of information, preparation for practical classes, laboratory work and testing. Students have access to the department's page in the Modular Learning Environment, where the Working Program of the discipline and the necessary materials for its educational and methodological support and control of learning results are posted.

Week number	Type of independent work	Hours
1	Study of lecture material No. 1. Preparation for practical work No. 1. Preparation for laboratory work No. 1.	8
2	Study of lecture material No. 2. Preparation for practical work No. 2. Defense of laboratory work No. 1.	8
3	Study of lecture material No. 3. Preparation for laboratory work No. 2. Preparation for the defense of laboratory work No. 2.	8
4	Study of lecture material No. 4. Preparation for practical work No. 3. Defense of laboratory work No. 2.	8
5	Study of lecture material No. 4. Preparation for laboratory work No. 3. Preparation for the defense of laboratory work No. 3.	8
6	Study of lecture material No. 5. Preparation for practical work No. 4. Defense of laboratory work No. 3.	8
7	Study of lecture material No. 6. Preparation for laboratory work No. 4. Preparation for the defense of laboratory work No. 4.	10
8	Study of lecture material No. 7. Preparation for practical work No. 5. Defense of laboratory work No. 4.	10
9	Study of lecture material No. 7. Preparation for laboratory work No. 5. Preparation for the defense of laboratory work No. 5.	10
10	Study of lecture material No. 8. Preparation for practical work No. 6. Defense of laboratory work No. 5.	10
11	Study of lecture material No. 8. Preparation for laboratory work No. 6. Preparation for the defense of laboratory work No. 6.	10
12	Study of lecture material No. 9. Preparation for practical work No. 7. Defense of laboratory work No. 6.	10
13	Study of lecture material No. 10. Preparation for laboratory work No. 7. Preparation for the defense of laboratory work No. 7.	10
14	Study of lecture material No. 10. Preparation for practical work No. 8. Defense of laboratory work No. 7. Preparation for test control	10
15	Study of lecture material No. 11. Preparation for laboratory work No. 8. Preparation for the	8

	defense of laboratory work No. 8.	
16	Study of lecture material No. 12. Preparation for practical work No. 9. Defense of laboratory work No. 8.	8
	Total:	144

6. Technologies and teaching methods

The process of learning in the discipline is based on the use of traditional and modern technologies and teaching methods, in particular: lectures (using visualization methods, problem-based and interactive learning, motivational techniques, information and communication technologies); practical classes (using instruction, demonstration, solving typical and applied problems, case analysis, situational tasks, discussion elements etc.); laboratory classes: using project methods, training exercises, analysis of problem situations, explanations, discussions, etc.; independent work (study of theoretical material, preparation for practical and laboratory work, final control), using information and computer technologies and distance learning technologies.

7. Control methods

Current control is carried out during classroom practical and laboratory classes, as well as on the days of control events established by the work program and schedule of the educational process, including using the Modular Learning Environment. The following methods of current control are used:

– evaluation of work results in practical classes (surveying theoretical material, solving problems, participating in discussing situations);

– evaluation of the results of laboratory work defense;

– test control of the assimilation of theoretical material on the topics.

The final semester grade is given based on the results of current control. A higher education applicant who has scored less than 60 percent of the maximum score in any type of academic work is considered to have academic debt. Academic debt from semester control is eliminated during the examination session or according to the schedule established by the dean's office in accordance with the "Regulations on Control and Evaluation of Learning Results of Higher Education Applicants at KhNU".

8. Discipline Policy

The policy of the academic discipline is generally determined by the system of requirements for a higher education applicant, which are stipulated by the current regulations of the University on the organization and educational and methodological support of the educational process. In particular, passing a safety briefing; attending classes on the discipline is mandatory. For objective reasons (confirmed by documents), theoretical training in agreement with the lecturer may take place online. Successful mastery of the discipline and the formation of professional competencies and program learning outcomes requires preparation forpractical and laboratory classes (study of theoretical material on the topic, participate in discussions regarding decisions made when students perform practical and laboratory work.

Higher education students must adhere to the established deadlines for completing all types of academic work in accordance with the work program of the academic discipline. The deadline for defending laboratory work is considered timely if the student defends it at the next meeting after completing the work.Missedpractical and The student is required to complete the course within the established time frame.than a term, but notno later than two weeks before the end of theoretical classes in the semester.

The student's assimilation of theoretical material in the discipline is assessed based on the results of a testing survey.

A higher education student, when performing independent work or individual work on a discipline, must adhere to the integrity policy (copying, plagiarism (including using mobile devices) are prohibited). In the event of detectionviolation of academic integrity policyIn any type of academic work, a higher education applicant receives an unsatisfactory grade and must re-perform the tasks on the relevant topic (type of work) as provided for in the work program. Any form of violation of academic integrity is not allowed.

9. Evaluation of student learning outcomes in the semester

The assessment of the academic achievements of a higher education applicant is carried out in accordance with the “Regulations on the Control and Evaluation of the Results of Study of Higher Education Applicants at KhNU”. During the ongoing assessment of the work performed by the applicant in each structural unit and the results obtained by him, the teacher assigns him a certain number of points fromestablished by the Work Programmefor this type of work. In this case, each structural unit of educational work can be credited if the applicant has scored at least 60 percent (the minimum level for a positive assessment) of the maximum possible amount of points assigned to the structural unit.

When assessing learning outcomeshigher education applicantsFor any type of educational work (structural unit), it is recommended to use the following generalized criteria:

Table – Criteria for evaluating the academic achievements of a higher education applicant

Assessment and level of achievement by the applicant of planned PNR and developed competencies	Generalized content of the evaluation criterion
Excellent (high)	A higher education applicant has deeply and fully mastered the content of the educational material, easily navigates in it and skillfully uses the conceptual apparatus; is able to connect theory with practice, solve practical problems, confidently express and justify his judgments. An excellent assessment involves a logical presentation of the answer in the language of instruction (oral or written), demonstrates high-quality design of the work and possession of special devices and tools,applicationsThe applicant does not hesitate to modify the question, is able to make detailed and generalizing conclusions, demonstrates practical skills in solving professional tasks. He made two or three minor errors in his answer.
Good (average)	The higher education applicant has demonstrated complete mastery of the educational material, possesses a conceptual apparatus, is oriented in the studied material; consciously uses theoretical knowledge to solve practical problems; the presentation of the answer is competent, but the content and form of the answer may contain individual inaccuracies, unclear formulation of rules, patterns, etc. The higher education applicant's answer is based on independent thinking. The higher education applicant made two to three minor errors in the answer.
Satisfactorily (sufficient)	The higher education applicant has demonstrated knowledge of the basic program material in the amount necessary for further study and practical activity in the profession, copes with the implementation of practical tasks provided for by the program. As a rule, the higher education applicant's answer is built at the level of reproductive thinking, the higher education applicant has weak knowledge of the structure of the academic discipline, makes inaccuracies and significant errors in the answer, hesitates when answering a modified question. At the same time, he has acquired the skills necessary to perform simple practical tasks that meet the minimum assessment criteria and has the knowledge that allows him to eliminate inaccuracies in the answer under the guidance of a teacher.
Unsatisfactorily (insufficient)	The higher education applicant has demonstrated disparate, unsystematic knowledge, is unable to distinguish between the main and secondary, makes mistakes in defining concepts, distorts their meaning, presents the material chaotically and uncertainly, and cannot use knowledge when solving practical tasks. As a rule, an “unsatisfactory” grade is given to a higher education applicant who cannot continue his studies without additional work on studying the academic discipline.

Structuring the discipline by types of academic work and evaluating student learning outcomes*daytime* forms of education in a semester

Classroom work																**Control measures**	**Semester control**
Laboratory exercises No.:								Practical classes								Test control	Test
1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
Number of points for each type of academic work (minimum-maximum)																	
3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5	12-20	By rating
24-40								**24-40**								**12-20**	**60-100****

Notes: *For the number of points scored in any type of academic work in the discipline, below the standard

If the student fails to achieve the minimum grade, he/she receives an unsatisfactory grade and must retake the exam within the time limit set by the teacher (dean). The institutional grade is determined in accordance with the table “Correlation between the institutional grading scale and the ECTS grading scale”.

Assessment in practical classes

The grade given for the practical session consists of the following elements: oral questioning of students on their knowledge of theoretical material on the topic; the student's fluency in terminology andskillProfessionally justify decisions made; results of independent work.

When evaluating a practical lesson, the teacher is guided by the generalized criteria given in the table "Criteria for evaluating the academic achievements of a higher education student"(minimum positive score – 3 points, maximum – 5 points).

Evaluation of the results of laboratory work defense

Laboratory work performed and designed in accordance with the requirements established by the Methodological Recommendations is comprehensively evaluated by the teacher during its defense, taking into account the following criteria: independence and creativity of execution; completeness of the answer and knowledge of the basic methods and principles of content management systems; quality of visual implementation and functionality and interactivity.

The result of the performance and defense of each laboratory work by a higher education applicant is evaluated in accordance with the table of Criteria for Assessing Academic Achievements of a Higher Education Applicant.

If the applicant's level of knowledge is lower than 60 percent of the maximum score established by the Work Program for each structural unit, the laboratory work will not be credited to him and to defend it, he must study the material on the topic of the work in more detail, the methodology for its implementation, correct gross errors and re-appear for its defense at the time designated by the teacher.

Evaluation of test control results

Each of the tests provided for in the Work Program consists of 20 test tasks, each of which is equivalent.

According to the table structuring types of work for test control, the applicant, depending on the number of correct answers, can receive from 18 to 20 points.

Distribution of points depending on the correct answers given to the test tasks

Number of correct answers	0-9	10-11	12-13	14-15	16-17	18-19	20
Percentage of correct answers	0-45	50–55	60–65	70–75	80–85	90-95	100
Number of points received	12	14	16	17	18	19	20

The testing time is 30 minutes.The student takes the test online in the Modular Learning Environment. The student can also take the test in writing, recording the correct answers in the answer sheet.If you receive a negative score, you must retake the test before the next control date.

The final semester grade according to the institutional scale and the ECTS scale is determined in an automated mode after the teacher enters the assessment results in points for all types of academic work into the electronic journal. The correlations between the institutional assessment scale and the ECTS assessment scale are given below in the table "Correlations".

A semester credit is issued at the last lesson provided that the total amount of points accumulated by the applicant in the discipline (other educational component) according to the results of the current control is within the range of 60 to 100 points. In this case, the institutional scale is given the grade "credited", and on the ECTS scale - the letter designation of the grade corresponding to the amount of points earned by the student in accordance with the Correlation table. The applicant's presence in this case is not mandatory.

Table– Correlation between the institutional grading scale and the ECTS grading scale

<table>
<tr><th rowspan="2">ECTS assessment</th><th rowspan="2">Rating scale points</th><th colspan="2">Institutional assessment(level of achievement by a higher education student of the planned learning outcomes in the academic discipline)</th></tr>
<tr><th>Test</th><th>Exam/differentiated test</th></tr>
<tr><td>A</td><td>90-100</td><td rowspan="5">Enrolled</td><td>Perfectly/Excellent–a high level of achievement of the planned learning outcomes in the academic discipline, which indicates the applicant's unconditional readiness for further study and/or professional activity in the specialty</td></tr>
<tr><td>B</td><td>83-89</td><td rowspan="4">Good/Good–average (maximum sufficient) level of achievement of planned learning outcomes in the academic discipline and readiness for further study and/or professional activity in the specialty

Satisfactorily/Satisfactory–Have minimally sufficient learning outcomes in the academic discipline for further study and/or professional activity in the specialty</td></tr>
<tr><td>C</td><td>73-82</td></tr>
<tr><td>D</td><td>66-72</td></tr>
<tr><td>E</td><td>60-65</td></tr>
<tr><td>FX</td><td>40-59</td><td rowspan="2">Not included</td><td>Unsatisfactorily/Fail–A number of planned learning outcomes in the academic discipline are missing. The level of acquired learning outcomes is insufficient for further education and/or professional activity in the specialty.</td></tr>
<tr><td>F</td><td>0-39</td><td>Unsatisfactorily/Fail–No learning outcomes</td></tr>
</table>

10. Questions for self-monitoring of learning outcomes

1. Name the minimum set of software for a web developer.
2. How can I access the remote server where the site files are stored?
3. Name the main components in writing a resource URL.
4. What is content and content management?
5. CMS architecture.
6. What types of CMS are there to use?
7. What are the components of a web page structure?
8. Name the forms of publishing a page as a content element.
9. In what ways is multilingualism implemented on web pages?
10. List popular website builders and indicate services that provide free use.
11. Indicate the features of the designers, in particular the possibility of implementing individual changes.
12. List the positive characteristics of the selected designer, as well as note the limitations regarding certain functionalities.
13. How can I get hosting and a domain address from a designer?
14. Name the main reasons why a user might choose to create a website using a designer.
15. Name the minimum set of software for a web developer.

16. What types of hosting are offered for hosting websites?
17. Why do hosting companies provide free plans?
18. What are the reasons for choosing free hosting?
19. What are the caveats to using free hosting?
20. How can I access the remote server where the site files are stored?
21. What is SMM and what is its main goal?
22. Name the main social networks used for marketing.
23. What is a content plan and why is it needed in SMM?
24. What types of content exist on social networks?
25. What is targeting and what are its main types?
26. What is the difference between organic reach and paid promotion?
27. What is engagement and how is it measured?
28. What is a CTA (call-to-action) and how is it used in SMM?
29. Name the main KPIs for evaluating the effectiveness of an SMM campaign.
30. What is a hashtag and what role does it play in promoting content?
31. What types of ads can be run in Facebook Ads Manager?
32. What is A/B testing in the context of social media?
33. What are the advantages of using video content in SMM?
34. What is storytelling and how is it used in social media?
35. Name the main tools of social media analytics.
36. What is an SMM marketing funnel and what are its stages?
37. How to determine the target audience for an SMM campaign?
38. What is reputation management in social networks?
39. How to interact with negative comments on social media?
40. Conduct a comparative analysis of popular programs that contain a utility for FTP access.
41. Which module in the browser structure is the defining one, what is its main purpose?
42. Name popular programs that provide remote access to another computer, their capabilities and features.
43. Name the main components in writing a resource URL.
44. Name the main families of computer fonts. Which family is best to use for websites?
45. What two categories can fonts used for the web be classified into?
46. List the known web font formats.
47. Name the approaches to applying an arbitrary font on a page.
48. What font characteristics are essential for use on a website?
49. What CSS properties can be applied to fonts?
50. How can I connect a font from the Google Fonts collection?
51. What is an icon font, and how can it be used on a website?
52. Conduct a comparative review of well-known icon fonts.
53. How can I edit an SVG icon?
54. Name the approaches used to create website pages.
55. What software tools are used to create modern websites?
56. What is the minimum set of tools needed to create a simple statistical website?
57. What is page structure?
58. Name the main blocks that a website page should contain.
59. What are the basic rules for forming the physical structure of a site?
60. What mandatory folders should be in the project structure?
61. What are the principles used to name project files and folders?
62. What graphic formats are used on the web?
63. What are the differences between graphic formats?
64. Conduct a comparative review of online graphic editors.
65. What capabilities do raster and vector graphics editors provide?
66. What services does Adobe Color Themes provide?
67. What criteria are used to select a color scheme for a thematic site?
68. What formats are used for images with transparent backgrounds?
69. Name the main characteristics of an image that is placed on a website.
70. What is a favicon?
71. What are the main favicon sizes and formats?
72. Name several options for obtaining a favicon.
73. Why are application APIs developed, what functionality do they provide?

74. How can I use a third-party service with an available API on my own website?
75. What are the advantages of mapping services?
76. How can I insert an online map into a website?
77. What are the differences between different mapping services?
78. What are the usage restrictions imposed by the Google Maps mapping service?
79. How can I insert dynamic elements from the jQuery UI library into my website?
80. How to connect an external plugin to the site?
81. What files should I pay attention to when connecting external plugins to my site?
82. What is script initialization used for?
83. How can I connect the necessary options to the script?
84. What tasks does the plugin solve?
85. Are plugin modifications possible?
86. List the plugins that can be used to implement a slider.
87. What problems can arise when using too many scripts on a page?
88. Why is js called a client-side programming language?
89. How do js scripts differ from server-side programming languages?
90. What are the main benefits of Bootstrap for web developers?
91. What basic modules make up the framework?
92. What are the qualities of Bootstrap-based page templates?
93. How does Bootstrap propose to distribute information across multiple columns?
94. What Bootstrap classes allow you to format text fragments?
95. What visual accents can be applied to text fragments?
96. Which files from the Bootstrap library are important and prioritized for inclusion?
97. Name the dynamic elements that can be addressed by library scripts.
98. What external JS library is required to be connected to a Bootstrap site? Why?
99. What are the differences between different versions of Bootstrap?
100. What is a content management system called?
101. Name the conditions under which CMS is used.
102. What are the main benefits of using a CMS and what caveats should be considered?
103. What free CMS are popular and what is their specialization?
104. Name the features of the WordPress CMS.
105. What are the advantages of the WordPress CMS system?
106. Name the typical problems that a WordPress user faces when creating a website.
107. What are the requirements for WordPress hosting?
108. What benefits does the user get from using a commercial CMS?
109. What are the important criteria for choosing a commercial CMS?
110. In what cases are self-written CMS used?
111. What points should users consider when using self-written CMS?

11. Educational and methodological support

The educational process in the discipline "Web Service Content Management Systems" is fully and sufficiently provided with the necessary educational and methodological literature.

12. Hardware and software for the discipline (if necessary)

Information and computer support: PC, tablet, smartphone or other mobile device, projector. Software: Microsoft Office or similar programs, Internet access, working with presentations.

Studying the academic discipline does not require the use of special software applications, except for commonly used programs and operating systems,Free in-browser templates are used, such as Figma and Canva.

13. Recommended reading:

Main

1. Kaplunov D. Kings of Social Networks. Published by: Book Chef. 2022. - 432 p. ISBN: 9786175480922.
2. MillerD. Create a StoryBrand. Tell the story of your brand and they will hear you. In:Vivat. 2021. – 240 p. ISBN: 9789669822376.
3. Filanovsky O. The main marketing book. Published by: Fabula. 2018. – 304 p. ISBN: 9786170938893.
4. Trout D., Rice E., Rivkin S. Marketing Wars. Published by: Fabula. 2019. – 480 p. ISBN: 978-617-09-5385-8, 978-617-09-5384-1.

5. Robert M.-K. Jeras T. Storynomics Marketing in the Post-Advertising Era. In: Vivat, Pelican. 2019. – 240 p.
6. Litovchenko I.L., Pylypchuk V.P. Internet marketing. Published: Center for Educational Literature. 2019. – 184 p.
7. Digital marketing: theory and practice [Text]: textbook / Slobodyanyk A. M. [et al.]; Kyiv. International University - Kyiv: KyMU, 2022. - 228 p.: fig., table. - Bibliography: p. 215-227. - 200 notes - ISBN 978-617-651-234-9.
8. Kotler F., Cartaya K. Marketing 4.0: transition from traditional to digital / translated from English. — Kyiv: Nash Format, 2017. — 256 p.
9. Vinogradova O.V. Marketing in social networks: a teaching manual / O.V. Vinogradova, N.M. Nedopako. – Kyiv: DUT, 2022. – 202 p.
10. Working with Social Media: A Guide to Using Social Media. – Kyiv: Department of Press and Public Information of the EU Advisory Mission to Ukraine, 2020. [Electronic resource]. – Access mode: https://www.euam- 82 ukraine.eu/wp-content/uploads/2020/09/Working-with-Social-MediaCompendium-UKRAINIAN-AUGUST-2020-FOR-PUBLICATION.pdf.
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8. INFORMATION RESOURCES

12. How to build an SMM strategy: a step-by-step plan for promotion in social networks [Electronic resource]. - Access mode:https://texterra.ru/blog/kak-postroit-smm-strategiyu-poshagovyy-planprodvizheniya-v-sotsialnykh-setyakh.html.
13. Social networks for conducting and promoting business [Electronic resource]. - Access mode:http://vseproip.com/biznes-ip/maluy/socialnye-seti-dlya-biznesa.html
14. Overview of Instagram analytics methods: metrics, tools, tips [Electronic resource]. - Access mode:https://www.bizmaster.xyz/2019/03/oglyad-metodiv-analityky-v-instagram-metrykyinstrumenty-porady.html
15. Kaftandjiev S. Integrated Marketing Communications C. Kaftandjiev/ - Dey Street Books; 1st edition. 2021. R. 304.
16. Marketing communications: textbook/ N.V. Popova, A.V. Kataeva, L.V. Bazaliev, O.I. Kononov, T.A. Mukha, under the general editorship of N.V. Popova. – Kharkiv: Fact, 2020. – 315 p.
17. Martin Thomas.The Financial Times Guide to Social Media Strategy. – Kharkiv: Fabula, 2020 – 304p.
18. Henry Carroll. Read if you want to become an Instagram star. – ArtHuss, 2021. – 128

Electronic University:

10. Modular learning environment MOODLE. Access to the resource: https://msn.khmnu.edu.ua/course/view.php?id=7742
11. University Electronic Library. Access to the resource:http://lib.khnu.km.ua/asp/php_f/p1age_lib.php.
12. University Electronic Library. Access to the resource:http://lib.khnu.km.ua/asp/php_f/p1age_lib.php

WEB SERVICES CONTENT MANAGEMENT SYSTEMS

Type of discipline	Selective
Level of higher education	First (bachelor's)
Language of instruction	English
Semester	–
Number of ECTS credits assigned	8.0
Forms of education for which the discipline is taught	Full-time (day)

Learning outcomes. After studying the discipline, the student must: know the basic principles of CMS systems and their application for web content management; possess basic tools for creating, editing and organizing content on websites; be able to plan, launch and evaluate the effectiveness of SMM campaigns, determine the target audience and customer segments; apply the acquired knowledge to design and implement digital marketing strategies; demonstrate the ability to work with analytics, create reports and offer optimization solutions based on the data obtained; show initiative, the ability to self-learn, effective communication, work in a team and make responsible management decisions in the field of web content and SMM.

Content of the academic discipline. Basic concepts. CMS architecture. Search engines. Comparative analysis of search engines. The importance of content when filling a site.The Instagram effect.Content marketing. Creating effective business content. Features of promotion in social networks. Types of content for the site. Content in social networks Facebook. Content management systems.

Planned learning activities: The minimum amount of study hours in one ECTS credit of an academic discipline for the first (bachelor's) level of higher education in full-time education is 10 hours per 1 ECTS credit.

Forms (methods) of learning: The learning process in the discipline is based on the use of traditional and modern technologies and teaching methods, in particular: lectures (using visualization methods, problem-based and interactive learning, motivational techniques, information and communication technologies); practical classes (using instruction, demonstration, solving typical and applied problems, case analysis, situational tasks, discussion elements, etc.); laboratory classes: using project methods, training exercises, analysis of problem situations, explanations, discussion, etc.; independent work (study of theoretical material, preparation for practical and laboratory work, final control), using information and computer technologies and distance learning technologies.

Forms of assessment of learning outcomes:evaluation of work results in practical classes,results of laboratory work defense; test control of the assimilation of theoretical material on the topics.

Type of semester control: credit.

Educational resources:

1. Kaplunov D. Kings of Social Networks. Published by: Book Chef. 2022. - 432 p. ISBN: 9786175480922.
2. MillerD. Create a StoryBrand. Tell the story of your brand and they will hear you. In:Vivat. 2021. – 240 p. ISBN: 9789669822376.
3. Filanovsky O. The main marketing book. Published by: Fabula. 2018. – 304 p. ISBN: 9786170938893.
4. Trout D., Rice E., Rivkin S. Marketing Wars. Published by: Fabula. 2019. – 480 p. ISBN: 978-617-09-5385-8, 978-617-09-5384-1.
5. Robert M.-K. Jeras T. Storynomics Marketing in the Post-Advertising Era. In: Vivat, Pelican. 2019. – 240 p.
6. Litovchenko I.L., Pylypchuk V.P. Internet marketing. Published: Center for Educational Literature. 2019. – 184 p.
7. Modular learning environment. Access to the resource: https://msn.khmnu.edu.ua/course/view.php?id=7742.
8. University electronic library. Access to the resource: http://library.khmnu.edu.ua/.

Lecture: Doctor of Technical Sciences, Professor Yelyzaveta HNATCHUK