MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
IVANO-FRANKIVSK NATIONAL TECHNICAL
UNIVERSITY OF OIL AND GAS

Institute of Information Technologies

Department of Computer Systems and Networks

APPROVED
Director of the Institute
of Information Technologies
_____ I.Z. Liutak
(signature) (full name)
«___» _____ 2020

WEB-CMS Component development
(name of academic discipline)

SYLLABUS

first (bachelor) level
(level of higher education)

field of knowledge ___12 - Information technology_____
(code and name)

specialty __123 - Computer engineering_____
(code and name)

specialization * _____
(name)

type of discipline ___required_____
compulsory / elective

Ivano-Frankivsk-2020

The syllabus of discipline **"**WEB-CMS Component development**"** for students studying according to the educational program "Computer engineering" for obtaining the educationally-qualifying level – **bachelor's degree** in Computer engineering.

Developer:
assistant professor of the Computer Systems And Networks Department, Ph.D. _____ M.O. Slabinoha
(signature) (full name)

The syllabus was considered and approved at the meeting of the Oil and Gas Production Department Protocol on « 25 » August 2020 № 1.

Head of the Department Computer Systems And Networks Department, Ph.D. _____ S.I. Melnychuk
(signature) (full name)

1 DESCRIPTION OF THE EDUCATIONAL DISCIPLINE

The resource of hours for studying the discipline "WEB-CMS Component development" in accordance with the current RNP, its distribution in semesters and types of educational work for different forms of education is described in Table 1.

Table 1 - Distribution of hours allocated to studying the discipline

Name of indicators	Total		Distribution by semesters			
			Semester 5		Semester 6	
	Full-time study (FTS)	Part-time study (PTS)	Full-time study (FTS)	Part-time study (PTS)	Full-time study (FTS)	Part-time study (PTS)
Amount of credits ECTS	3	3			3	3
Number of modules	1	1			1	1
Total amount of time, hours	90	90			90	90
Auditorium classes, hours incl.:	48	18			48	18
lectures	32	8			32	8
seminars	-	-			-	-
practical classes	-	-			-	-
laboratory classes	16	10			16	10
Individual work, hours incl.:	42	72			42	72
performing of course work	-	-			-	-
performing of control tests (calculation and graphic works)	12	22			12	22
processing of the material outlined in lectures	5	20			5	20
processing of material submitted for individual study	10	10			10	10
preparation for practical classes and control tests	5	10			5	10
preparation of reports on laboratory works	10	10			10	10
preparation for the exam	-	-			-	-
Form of the semester control	Differentiated credit				Differentiated credit	

2 PURPOSE AND RESULTS OF LEARNING

The purpose of studying the discipline - the acquisition of competencies in the development of software based on popular content management systems

As a result of studying the discipline the student must demonstrate the following **learning outcomes** through knowledge, skills and abilities:

- Be able to search for information in various sources to solve problems of computer engineering.
- Know the latest technologies in computer engineering.
- Perform work qualitatively and achieve the set goal in compliance with the requirements of professional ethics.

The study of the discipline involves the formation and development of students' competencies provided by the relevant standard of higher education in Ukraine:

General:

- The ability to learn and master modern knowledge.
- Ability to apply knowledge in practical situations.

Professional:

ability to use modern methods and programming languages for the development of algorithmic and software.

Ability to systematically administer, use, adapt and operate existing information technologies and systems

Ability to design systems and their components taking into account all aspects of their life cycle and tasks, including creation, configuration, operation, maintenance and disposal.

3 PROGRAM AND STRUCTURE OF THE DISCIPLINE

C.1 Thematic plan of lectures

Plan of lectures discipline characterizing Table 2.

Table 2 -themed plan lectures

Modules, thematic modules and themes code	Names of modules (M), thematic modules (TM), themes (T) and their content	Amount of hours		**References**	
		FTS	PTS	ordinal number	chapter, unit
M 1	**Development of web components of modern CMS**	**18**	**6**		
TM1	**Administration, support and development of components for WordPress content management system**	**18**	**6**		
T 1.1	Overview of content management systems, their purpose and requirements for hardware and software. Wordpress content management system, its purpose, installation and usability	2	2		
T 1.2	Wordpress administrative panel. Users, roles, pages, records, media. Wordpress themes. Customize Wordpress Themes with Customizer	**2**	2		
T 1.3	Wordpress Plugins. Additional Wordpress functionality.	**2**			
T 1.4	Basics of editing Wordpress source code. Using the PHP programming language to work with Wordpress	**2**			
T 1.5	The functions.php file and its capabilities.	**2**			
T 1.6	Creating a new Wordpress theme	**2**	2		
T 1.7	Developing theme functionality to support plug-in functionality	**2**			
T 1.8	Developing simple plug-ins for Wordpress	**2**			
T 1.9	Updates, lifecycle and support for Wordpressbased software	**2-**			

Total:

M1 - content modules 1

3.2 Topics of laboratory classes

Topics of laboratory classes of the discipline are given in table 3.

Table 3 - Topics of laboratory classes

Modules, thematic modules and themes code	Names of modules (M), thematic modules (TM), themes of laboratory classes (L) and their content	Amount of hours		**References**	
		FTS	PTS	ordinal number	chapter, unit
M 1	**Web development component of modern CMS**	**24**	**4**		
3M1	**Administration, support and development of components for WordPress content management system**	**24**	**4**		
L 1.1	Installation and initial configuration of Wordpress	2	2		
L 1.2	Configuration and publication of basic Wordpress elements. Posts, pages, menu items, widgets.	2	2		
L 1.3	Selecting and configuring themes in Wordpress	2			
L 1.4	Selecting and configuring plugins in Wordpress	2			
L 1.5	Basics of PHP development for Wordpress. Information output, variables, conditions, cycles.	2			
L 1.6	Reserved variables in Wordpress, their structure and content. Work with associative arrays in PHP for use in Wordpress.	2			
L 1.7	Editing Wordpress themes. Wordpress theme structure and editing of installed themes. functions.php	4			
L 1.8	Develop your own Wordpress theme	4			
L 1.9	Create your own Wordpress plugins. Creating an administrative part. Generation of shortcodes and their publication in Wordpress	4			

3.3 Tasks for independent work of the student

Types of independent work and its general balance are characterized by table 4.

Code	Names of modules (M), content modules (TM), topics (T) and their content	Volume of hours		References	
		DFN	ZFN	serial number	section, subsection
M 1	**Development of web components of modern CMS**	**78**	**110**		
TM1	**Administration, support and development of components for management system WordPress content**	**78**	**110**		
T1.1	System administration of the server running CMS Wordpress	10	10		
T1.2	Debugging code in Wordpress. The main causes of errors and warnings in the development of Wordpress	25	30		
T1.3	Rules of good manners and Wordpress code for the development of themes	25	30		
T1.4	Rules of good manners and code Wordpress for the development of pluginsAND	18	40		

4 EDUCATIONALMETHODOLOGICAL SUPPORT

4.1 Main literature

1. Wordpress Tutorial [Electronic resource]. Access mode: https://www.tutorialspoint.com/wordpress/wordpress_tutorial.pdf
2. Wordpress Theme development: beginners guide [Electronic resource]. Access mode: https://www.doc-developpement-durable.org/file/Projets-informatiques/cours-&-manuels-informatiques/Wordpress/WordPress%20Theme%20Development,%203rd%20Edition.pdf
2. Wordpress plugin development essentials [Electronic resource]. Access mode: https://www.doc-developpement-durable.org/file/Projets-informatiques/cours-&-manuels-informatiques/Wordpress/WordPress%203%20Plugin%20Development%20Essentials.pdf

4.2 Additional literature

2. Wordpress Themes in depth [Electronic resource]. Access mode: **https://wp-tao.com/free/WordPress-Themes-In-Depth_DEMO.pdf**

4.3 Information resources on the Internet

1. Wordpress Developer Resources [Electronic resource]. Access mode: https://developer.wordpress.org/
2. Plugin Developer Handbook. [Electronic resource]. Access mode: https://developer.wordpress.org/plugins/
3. Theme Handbook. [Electronic resource]. Access mode: https://developer.wordpress.org/themes/

5 CONTROL METHODS AND SCORE SCHEME

Detailed information on methods of control of students' knowledge in lectures, practical and laboratory classes is given. An example of a scoring scheme for assessing students' knowledge of the discipline is given in Table 4. According to Table 4 at the beginning of the semester, a work plan of the discipline is developed.

Table 4 - Scheme of accrual of points in the process of assessing students' knowledge of the discipline "Cloud Computing Technology"

Types of controlled work	Maximum number of points
Module 1	
Control of theoretical knowledge acquisition of the content module MR1	28
Control of skills in performing and defending reports from seven laboratory works (8*9)	72
Total	100

Differentiated credit in the discipline is given to the student in accordance with the current rating scale, which is given below.

Assessment scale: national and ECTS

Sum of points for all types of educational activities	Assessment ECTS	Assessment on a national scale
		for exam, differentiated test, course project (work), practice
90 - 100	A	excellent
82-89	B	good
75-81	C	
67-74	D	satisfactory
60-66	E	
35-59	FX	unsatisfactory with the possibility of re-taking
0-34	F	unsatisfactory with mandatory re-study of disciplines