

KARTA PRZEDMIOTU

I. Dane podstawowe

Nazwa przedmiotu	Programowanie aplikacji internetowych
Nazwa przedmiotu w języku angielskim	Internet applications development
Kierunek studiów	Informatyka w j. angielskim
Poziom studiów (I, II, jednolite magisterskie)	I
Forma studiów (stacjonarne, niestacjonarne)	Stacjonarne
Dyscyplina	Informatyka
Język wykładowy	Angielski

Koordinator przedmiotu/osoba odpowiedzialna	Dr Rafał Stęgiński
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Forma zajęć (<i>katalog zamknięty ze słownika</i>)	Liczba godzin	semestr	Punkty ECTS
wykład			5
konwersatorium	30	IV	
ćwiczenia			
laboratorium	30	IV	
warsztaty			
seminarium			
proseminarium			
lektorat			
praktyki			
zajęcia terenowe			
pracownia dyplomowa			
translatorium			
wizyta studyjna			

Wymagania wstępne	Basics of algorithms and programming
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II. Cele kształcenia dla przedmiotu

C1 - Getting to know the basics of the PHP language
C2 - Getting acquainted with web application programming techniques
C3 - Familiarizing with the programming techniques of console applications
C4 - Getting to know the basic design patterns
C5 - Getting acquainted with the structure and the cycle of web application implementation

III. Efekty uczenia się dla przedmiotu wraz z odniesieniem do efektów kierunkowych

Symbol	Opis efektu przedmiotowego	Odniesienie do efektu kierunkowego
WIEDZA		
W_01	Understands the modern meaning of computer science and its applications	K_W01
W_02	Knows basic algorithms and examples of their practical implementation	K_W03
W_03	Has basic knowledge of the construction and management of information systems	K_W04
W_04	Has general knowledge of algorithmics, design and programming, operating systems, computer networks, software engineering, databases, artificial intelligence and computer graphics	K_W06
UMIEJĘTNOŚCI		
U_01	Is able to independently acquire and use information helpful in solving specific IT problems from technical documentation, help files as well as Internet resources and available literature	K_U02
U_02	Is able to design websites	K_U05
U_03	Is able to use decision support mechanisms to solve practical problems	K_U018
KOMPETENCJE SPOŁECZNE		

IV. Opis przedmiotu/ treści programowe

1. The WWW network
 - a. The http protocol
 - b. GET and POST requests
 - c. Processing on the client's side
 - d. Processing on the server side
 - e. REST
 - f. Asynchronous and asynchronous transfer (AJAX)
2. Syntax of the PHP language
 - a. Output instructions and subtitles
 - b. Constants, variables, expressions and operators
 - c. Control instructions
 - d. Functions in PHP
 - e. Encoding standards
3. Object-oriented programming
 - a. Classes and objects
 - b. Constructors, destructors and cloning
 - c. Components
 - d. Inheritance
 - e. Specifications of component visibility
 - f. Static components
 - g. Permanent
 - h. Abstract classes
 - i. Interfaces
 - j. Exceptions

k. Classes and final methods
 l. Magic methods
 m. Callbacks, anonymous functions and closures
 n. Naming spaces
 o. Interface "reflection API"
 4. Design patterns
 a. Basic information about design patterns
 b. Selected design patterns
 5. ORM software
 6. Software framework

V. Metody realizacji i weryfikacji efektów uczenia się

Symbol efektu	Metody dydaktyczne <i>(lista wyboru)</i>	Metody weryfikacji <i>(lista wyboru)</i>	Sposoby dokumentacji <i>(lista wyboru)</i>
WIEDZA			
W_01	Conversational lecture, Guided practice	Exam	Protocol
W_02	Conversational lecture, Guided practice	Exam	Protocol
W_03	Conversational lecture, Guided practice	Exam	Protocol
W_04	Conversational lecture, Guided practice	Exam	Protocol
UMIEJĘTNOŚCI			
U_01	Practical classes	Preparation / implementation of the project	Project rating card
U_02	Practical classes	Preparation / implementation of the project	Project rating card
U_03	Practical classes	Preparation / implementation of the project	Project rating card
KOMPETENCJE SPOŁECZNE			

VI. Kryteria oceny, wagi...

At grade 3, the student can:

W1 - can characterize the differences between the interpretation and compilation of the code

W2 - discuss the syntax of the PHP language

W3 - describe the mechanism of launching the web application (client / server model)

U1 - run sample internet applications made in various frameworks / languages

U2 - implement simple applications based on processing strings, arrays and files

K1 - can formulate opinions on basic PHP language constructs

K2 - can individually plan work on the application

At grade 4, the student can:

W1 - contrastively discuss the syntax of the PHP language in relation to any other language (eg C ++)

W2 - exchange and briefly characterize the known design patterns

U1 - implement object-oriented libraries that solve more advanced tasks

U2 - use your own libraries to implement the application

K1 - work individually and in groups to plan work on the application

At grade 5 the student can:

W1 - give examples of the use of the discussed design patterns

U1 - use design patterns in practice to implement your own libraries

U2 - publish your own libraries as Open Source projects

U3 - use OpenSource libraries

VII. Obciążenie pracą studenta

Forma aktywności studenta	Liczba godzin
Liczba godzin kontaktowych z nauczycielem	90
Liczba godzin indywidualnej pracy studenta	50

VIII. Literatura

Literatura podstawowa
1. Robin Nixon, Learning PHP, MySQL & JavaScript 5e (Learning PHP, MYSQL, Javascript, CSS & HTML5), O'Reilly; 5th ed. edition (8 Jun. 2018)
2. Lorna Jane Mitchell, PHP Web Services: APIs for the Modern Web, O'Reilly Media; 2 edition (6 Jan. 2016)
Literatura uzupełniająca