

Subject programme

1. Subject name / subject module: **PHP Programming**
2. Lecture language: **English**
3. The location of the subject in study plans:
 - Area or areas of the studies: **Computer Engineering and Mechatronics**
 - Degree of the studies: **1st degree studies**
 - Field or fields (implementation of effects standard): **Mechatronics**
4. Supervision of subject implementation:
 - The Institute / Another unit: **Institute of Informatics and Mechatronics**
 - The person responsible for the subject: **Skiba Grzegorz, mgr inż.**
 - People cooperating in the development of the programme of the subject:
5. The number of hours and forms of teaching for individual study system and the evaluation method:

Mode of study	Teaching activities with the tutor																				Total ECTS	
	Form of classes																					
	SOW	ECTS	Laboratory work	SOW	ECTS	...	SOW	ECTS	...	SOW	ECTS	...	SOW	ECTS	...	SOW	ECTS	...	SOW	ECTS	ECTS	
Full-time studies			32	43	3																	3
Part-time studies																						
Credit rigor			Graded assignment																			

6. Student workload – ECTS credits balance:

1 ECTS credit corresponds to 25-30 hours of student work needed to achieve the expected learning outcomes including the student's own work

Activity (please specify relevant work for the subject)	Hourly student workload (full-time studies/part-time studies)
Participation in lectures	-
Participation in laboratory classes	32
Preparation to laboratory classes	21
Independent study of the subject	10
Preparation of final project	10
Participation in an exam / graded assignment	2
Total student workload (TSW)	75
ECTS credits	3
* Student's workload related to trainings	75
Student's workload in classes requiring direct participation of academic teachers	32

7. Implementation notes: recommended duration (semesters), recommended admission requirements, relations between the forms of classes:
 - Recommended admission requirements – none.
 - Recommended duration of the subject is taken from the course plan.
8. Specific learning outcomes – knowledge, skills and social competence:

Specific learning outcomes for the subject		Form	Teaching method	Methods for testing of (checking, assessing) learning outcomes
Outcome symbol	Outcome description			
Knowledge				
K_W04	A student has basic knowledge in the field of technical informatics and telecommunications, necessary to understand at an advanced level the complex dependencies of mechatronic systems that use web applications with database systems and to apply this knowle	Laboratory work	Inquiry methods	Student learning activities
K_W06	A student knows and understands selected specific issues of structural and object-oriented programming in PHP language, MySQL databases and Web Servers as well as practical applications of this knowledge.			
K_W10	A Student has detailed knowledge of structural and object-oriented programming in PHP language, MySQL databases, Bootstrap framework and security issues related to web applications which use databases.			

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Skills				
K_U02	A student is able to use their knowledge to formulate and solve problems related to web applications that may occur in a professional activity environment.	Laboratory work	Inquiry methods	Student learning activities
K_U05	Student has PHP programming and database management experience and skills to use the norms and standards applicable in the mechatronics industry.			

9. Assessment rules / criteria for each form of education and individual grades:

0% - 50%	ndst	80% - 86%	db
51% - 70%	dst	87% - 93%	db+
71% - 79%	dst+	94% - 100%	bdb

Activity	Grades	Calculation	To Final
Tasks done during laboratory classes	dst, db, bdb (3,4,5)	arithmetic mean (3,4,5,4) * 70%	1
Attendance	on 70% of all classes	70% * 5 -> 3,5 * 10%	0,35
Final project	bdb (5)	5 * 20%	3,5
Final result			4,85
Grade		4,85/5 = 97%	bdb (5.0)

10. The learning contents with the form of the class activities on which they are carried out:

(Laboratory work)

1. Introduction to PHP scripting language, working with variables, arrays, loops and sets of data;
2. Designing relational databases for MySQL using phpMyAdmin, creating tables, constraints, views and MySQL queries;
3. Model of a client-server web application;
4. Programming web applications using object-oriented PHP and MySQL database;
5. Using HTML and Cascade Style Sheets to present data and create forms;
6. Working with various types of HTTP requests to communicate between client and server.

11. Required teaching aids:

- a. Lecture - multimedia projector
- b. Laboratory classes - specialist laboratory

12. Literature:

a. Basic literature:

- Kromann F. M.: PHP and MySQL Recipes, Apress, Berkeley, 2016.
- Hansen T. B., Lengstorf J., PHP for Absolute Beginners, Apress, Berkeley, 2014.
- Converse T., Park J., Morgan C., Kaczmarek D.: PHP 5 i MySQL: biblia, Helion, Gliwice: 2005.

b. Supplementary literature:

- Bartholomew D.: MariaDB and MySQL Common Table Expressions and Window Functions Revealed, Apress, Berkeley, 2017

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- Krause J.: Introducing Bootstrap 4, Apress, Berkeley, 2016
- c. Internet sources:
- <https://getbootstrap.com/docs/4.5/>, Bootstrap 4.5 documentation

13. Available educational materials divided into forms of class activities (Author's compilation of didactic materials, e-learning materials, etc.)

14. Teachers implementing particular forms of education:

Form of education	Name and surname
1. Lecture	
2. Laboratory classes	Skiba Grzegorz, mgr inż.
3. Training	
4. Project classes	
5. Workshop classes	
6. Simulation game	
7. Language classes	