



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Web applications

### Course

Field of study

Safety Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

part-time

Year/Semester

2/4

Profile of study

general academic

Course offered in

Polish

Requirements

elective

### Number of hours

Lecture

10

Tutorials

Laboratory classes

14

Projects/seminars

Other (e.g. online)

### Number of credit points

5

### Lecturers

Responsible for the course/lecturer:

Ph.D., Eng. Zbigniew Włodarczak,

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Responsible for the course/lecturer:

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### Prerequisites

Using Windows, using websites. Ability to formulate needs and solve them. Cooperation in the group for the implementation of the project.



## Course objective

To familiarize students with selected technologies and standards in the field of creating applications available through the WWW. Practical learning how to create simple applications.

## Course-related learning outcomes

### Knowledge

Knows development trends and best practices in creating web applications [P6S\_WK\_03]

Knows the basic concepts and principles of copyright protection, information security and intellectual property protection in the context of web applications [P6S\_WK\_05]

### Skills

Is able to use analytical, simulation and experimental methods to formulate and solve engineering tasks, also using information and communication methods and tools in the process of creating internet applications [P6S\_UW\_04]

Is able to plan and conduct experiments on web applications, including computer measurements and simulations, interpret the results obtained and draw conclusions [P6S\_UO\_01]

### Social competences

Is able to initiate activities related to the formulation and transfer of information and cooperation in society in connection with the creation of internet applications [P6S\_KO\_02]

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The lecture grade is based on the percentage of the colloquium. Questions and tasks checking understanding of the issues. Passing threshold - 50%.

The grade from the laboratory is given as an average of the grades of individual tasks performed during classes. The assessment takes into account the correctness and completeness of the results obtained.

## Programme content

1. HTTP protocol: the principle of the HTTP protocol, construction and transmission of HTTP messages, HTML and XML languages as examples of content transferred via HTTP.
2. Simple web application: configuration of the programming environment and web server, implementation of several selected functions called with sending a message, making calculations and displaying the result on the page.
3. Web application architectures: client-server architecture, multi-layer architecture, application overview (WML, SOAP).
4. Server-side logic implementation: request handling and processing, session support, image generation.
5. Implementation of logic on the client side: JavaScript, AJAX.
6. Overview of selected WWW technologies.

## Teaching methods



Lectures: informative lecture, problem lecture, seminar lecture, case method.

Laboratories: laboratory (experiment) method, workshop method.

### Bibliography

#### Basic

Lemay L., Colburn R., Kyrnin J., HTML, CSS i JavaScript dla każdego. Wydanie VII, Helion 2016

Nixon R., PHP, MySQL i JavaScript. Wprowadzenie. Wydanie V, Helion 2019

<https://www.w3schools.com/>

#### Additional

Duckett J., HTML i CSS. Zaprojektuj i zbuduj witrynę WWW. Podręcznik Front-End Developera, Helion 2018

Welling L., Thomson L., PHP i MySQL. Tworzenie stron WWW. Vademecum profesjonalisty. Wydanie V, Helion 2017

<https://pasja-informatyki.pl/>

### Breakdown of average student's workload

|   | Hours | ECTS |
|---|-------|------|
| Total workload  | 125   | 5,0  |
| Classes requiring direct contact with the teacher   | 25    | 1,0  |
| Student's own work (literature studies, preparation for laboratory classes, preparation for tests) <sup>1</sup> | 100   | 4,0  |

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<sup>1</sup>delete or add other activities as appropriate