**SYLLABUS**

**regarding the qualification cycle FROM 2024TO 2025**

1. Basic Course/Module Information

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| --- | --- |
| Course/Module title | Internet technologies |
| Course/Module code \* |  |
| Faculty (name of the unit offering the field of study) | College of Natural Sciences |
| Name of the unit running the course | Institute of Computer Science |
| Field of study | Computer Science & Computer Science and Econometrics |
| Qualification level | First degree |
| Profile | Academic |
| Study mode | Full-time |
| Year and semester of studies | Year 2, semester 4 |
| Course type | Major |
| Language of instruction | English |
| Coordinator | Krzysztof Balicki, PhD |
| Course instructor | Krzysztof Balicki, PhD |

\* - as agreed at the faculty

1.1. Learning format – number of hours and ECTS credits

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Semester  (n0.) | Lectures | Classes | Colloquia | Lab classes | Seminars | Practical classes | Internships | others | **ECTS credits** |
| 4 |  |  |  | 30 |  |  |  |  | 4 |

1.2. Course delivery methods

- conducted in a traditional way

- involving distance education methods and techniques

1.3. Course/Module assessment (exam, pass with a grade, pass without a grade)

pass with a grade

2. Prerequisites

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| --- |
| none |

3. Objectives, Learning Outcomes, Course Content, and Instructional Methods

3.1. Course/Module objectives

|  |  |
| --- | --- |
| O1 | Acquainting with the basics of functioning of websites on the Internet. |
| O2 | Acquiring the ability to create websites using HTML, Cascading Style Sheets, JavaScript, JSON and XML notation. |
| O3 | Acquiring the skills to test and manage websites. |
| O4 | Acquainting with positioning of websites on the Internet (SEO). |

3.2. Course/Module Learning Outcomes (to be completed by the coordinator)

|  |  |  |
| --- | --- | --- |
| Learning Outcome | The description of the learning outcome  defined for the course/module | Relation to the degree programme outcomes |
| LO\_01 | The student knows about choosing a domain and hosting. He manages a website and knows the possibilities and limitations of hosting websites on the Internet. The student has knowledge of the principles of data security in the network. | K\_W08 |
| LO\_02 | The student knows web design standards, methods, techniques, and limitations for desktop and mobile devices. | K\_W07 |
| LO\_03 | The student can create a website using modern Internet technologies, adapting it to the needs and requirements of the user - both in technical, social, economic, and legal terms. He can host a website on the network and adapt the hardware and network requirements to its correct operation. | K\_U07  K\_U11  K\_U14  K\_U19 |

**3.3. Course content (to be completed by the coordinator)**

1. Lectures

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| --- |
| Content outline |
| Basic information about how web pages work on the Internet. |
| Web developer tools. |
| HTML language - the structure of the document. |
| New elements in HTML5. |
| Formatting the document. Cascading Style Sheets (CSS). |
| Programming in JavaScript. |
| HTML document object model and browser objects. |
| Event programming. |
| Forms validation. |
| JSON notation and the basics of XML. |
| Publish, test, and manage a website. |
| Positioning the website. |

1. Classes, laboratories, seminars, practical classes

|  |
| --- |
| Content outline |
| Creation of a website in HTML. |
| Formatting the site using CSS. |
| Responsive Web Design. |
| Client-side programming with JavaScript language. |
| Event programming. |
| Forms validation. |
| JSON notation and XML for data description and representation. |
| Publish, test, and manage your site. |
| Positioning the website. |

3.4. Methods of Instruction

Lecture: a lecture supported by a multimedia presentation

Laboratory: solving exercises, implementation projects

4. Assessment techniques and criteria

4.1 Methods of evaluating learning outcomes

|  |  |  |
| --- | --- | --- |
| Learning outcome | Methods of assessment of learning outcomes (e.g. test, oral exam, written exam, project, report, observation during classes) | Learning format (lectures, classes,…) |
| LO-01 | observation during classes, project | lecture |
| LO-o2 | observation during classes, project | lab |
| LO-o3 | project, test | lab |

4.2 Course assessment criteria

|  |
| --- |
| Lectures  The learning outcome of the lectures is verified during laboratory classes and  evaluation of projects.  Lab  To complete the lab, you must pass the HTML and CSS test and JavaScript programming test and design a template for a responsive webpage and the client-side JavaScript application. The final grade is the average of marks from two tests and two projects. You must earn at least half of the maximum number of points to complete the test. Test grades are proportional to the number of points scored. When evaluating projects, we consider criteria such as usefulness, novelty, innovation, aesthetics, complexity, documentation, and presentation. Activity in the labs is also considered, as it may lower or increase the final grade by half a degree. |

5. Total student workload needed to achieve the intended learning outcomes

– number of hours and ECTS credits

|  |  |
| --- | --- |
| Activity | Number of hours |
| Scheduled course contact hours | 30 |
| Other contact hours involving the teacher (consultation hours, examinations) | 5 |
| Non-contact hours - student's own work (preparation for classes or examinations, projects, etc.) | 65 |
| Total number of hours | 100 |
| Total number of ECTS credits | 4 |

\* One ECTS point corresponds to 25-30 hours of total student workload

6. Internships related to the course/module

|  |  |
| --- | --- |
| Number of hours | - |
| Internship regulations and procedures | - |

7. Instructional materials

|  |
| --- |
| Compulsory literature:   1. W3C: [https://www.w3.org](https://www.w3.org/) 2. MDN Web Docs: https://developer.mozilla.org/en-US 3. W3Schools Online Web Tutorials: [https://www.w3schools.com](https://www.w3schools.com/) 4. Maciej Zakrzewicz i in., *Aplikacje WWW*: <http://wazniak.mimuw.edu.pl/index.php?title=Aplikacje_WWW> |
| Complementary literature:   1. The [Web Design Group](https://www.htmlhelp.com/about/): https://www.htmlhelp.com 2. Mirosław Zelent (filmy na YouTube): <https://www.youtube.com/results?search_query=kurs+html+pasja+informatyki> |

Approved by the Head of the Department or an authorised person