# GDAŃSK UNIVERSITY OF TECHNOLOGY

## Subject card

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| Subject name and code | Development of Web Applications, PG_00047641 |
| Field of study | Informatics |

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| Date of commencement of studies | October 2023 | Academic year of realisation of subject | 2023/2024 |
| Education level | first-cycle studies | Subject group | Obligatory subject group in the field of study |
| Mode of study | Full-time studies | Mode of delivery | at the university |
| Year of study | 1 | Language of instruction | Polish |
| Semester of study | 1 | ECTS credits | 4.0 |
| Learning profile | general academic profile | Assessment form | exam |

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| Conducting unit | Department of Computer Architecture -> Faculty of Electronics, Telecommunications and Informatics |

| Name and surname of lecturer (lecturers) | Subject supervisor | mgr inż. Krystyna Dziubich |
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| | Teachers | mgr inż. Krystyna Dziubich<br><br>mgr inż. Jan Majkutewicz |

| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|---|
| | Number of study hours | 15.0 | 0.0 | 0.0 | 15.0 | 0.0 | 30 |
| | E-learning hours included: 0.0 | | | | | | |

| Learning activity and number of study hours | Learning activity | Participation in didactic classes included in study plan | Participation in consultation hours | Self-study | SUM |
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| | Number of study hours | 30 | 20.0 | 50.0 | 100 |

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| Subject objectives | Understanding the mechanisms and tools for developing web applications |

| Learning outcomes | Course outcome | Subject outcome | Method of verification |
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| | [K6_W41] Knows and understands, to an advanced extent, the operation and evaluation criteria of data processing, storage and transfer methods, including computational algorithms, artificial intelligence and data mining | The student understands: HTTP communication support (POST and GET transmission); script-side processing of the server, preserving the data in the database; General information about the site and keeping them in WebStorage. | [SW1] Assessment of factual knowledge |
| | [K6_U08] while identifying and formulating specifications of engineering tasks related to the field of study and solving these tasks, can:n- apply analytical, simulation and experimental methods,n- notice their systemic and non-technical aspects,n- make a preliminary economic assessment of suggested solutions and engineering work n | The student uses the development environment to create, test and design a project task; The student uses the production environment to launch and present the final form of the project task. | [SU1] Assessment of task fulfilment |
| | [K6_U42] can apply tools and methods of designing, optimization, monitoring, management, increasing reliability and protection from safety hazards in local and distributed information systems and applications | The student knows and can apply the Front Controler design templates, MVC, routing tables. He understands the concept of data sanitization; | [SU1] Assessment of task fulfilment |
| | [K6_W03] Knows and understands, to an advanced extent, the construction and operating principles of components and systems related to the field of study, including theories, methods and complex relationships between them and selected specific issues - appropriate for the curriculum | The student uses knowledge in the field of digital documents, basics of programming and network communication. He knows the rules of operation and processing of scripts on the client's side as well as on the server side. | [SW1] Assessment of factual knowledge |
| | [K6_U43] can analyse date and formulate, apply and assess appropriate formal models and algorithms for solving problems in the field of information systems and applications | Student is able to choose the right architecture of the web solution depending on the needs | [SU1] Assessment of task fulfilment |

| Subject contents | 1. Internet protocols, Internet architecture (DNS servers; protocols: HTTP , URI, URL, URN);<br><br>2. The client side - browser (javaScript, DOM, jQuery);<br><br>3. Server side (PHP, handling of HTTP requests, MongoDB as an example of a database, session mechanism, introduction to access control issues, MVC pattern); |
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| Prerequisites and co-requisites | Basic HTML and CSS |

| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
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| | Project | 50.0% | 50.0% |
| | Written exam | 50.0% | 50.0% |

| Recommended reading | Basic literature | L. Shklar, R. Rosen: Web Application Architecture: Principles, Protocols and Practices, 2nd ed., Wiley, 2009 |
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| | Supplementary literature | No requirements |
| | eResources addresses | Adresy na platformie eNauczanie:<br>Wytwarzanie Aplikacji Internetowych 23/24 -OK - Moodle ID: 30811 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30811 |

| Example issues/ example questions/ tasks being completed | HTTP protocol in use (Requests Headers and Response Headers);<br><br>JavaScript, jQuery);<br><br>Simple Web Application in PHP; |
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| Work placement | Not applicable |