



## Subject card

|   |  |  |                                     |                                     |  |            |     |
|---|--|--|-------------------------------------|-------------------------------------|--|------------|-----|
| Subject name and code                       | Data Processing with Mobile Platforms, PG_00047973   |  |                                     |                                     |  |            |     |
| Field of study                              | Informatics  |  |                                     |                                     |  |            |     |
| Date of commencement of studies             | October 2021   | Academic year of realisation of subject                  |                                     |                                     | 2024/2025  |            |     |
| Education level                             | first-cycle studies  | Subject group  |                                     |                                     | Optional subject group<br>Subject group related to scientific research in the field of study |            |     |
| Mode of study                               | Full-time studies  | Mode of delivery   |                                     |                                     | at the university  |            |     |
| Year of study                               | 4  | Language of instruction                                  |                                     |                                     | Polish   |            |     |
| Semester of study                           | 7  | ECTS credits   |                                     |                                     | 2.0  |            |     |
| Learning profile                            | general academic profile   | Assessment form  |                                     |                                     | assessment   |            |     |
| Conducting unit                             | Department of Geoinformatics -> Faculty of Electronics, Telecommunications and Informatics   |  |                                     |                                     |  |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor   |  | dr inż. Przemysław Falkowski-Gilski |                                     |  |            |     |
|   | Teachers   |  | dr inż. Przemysław Falkowski-Gilski |                                     |  |            |     |
| Lesson types and methods of instruction     | Lesson type  | Lecture  | Tutorial                            | Laboratory                          | Project  | Seminar    | SUM |
|   | Number of study hours  | 15.0   | 0.0                                 | 15.0                                | 0.0  | 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 |
|   | Number of study hours  | 30   |                                     | 2.0                                 |  | 18.0       | 50  |
| Subject objectives                          | The objective of this course is to teach students basic mobile data processing in mobile devices using various data processing models such as client-server. |  |                                     |                                     |  |            |     |

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| Learning outcomes   | Course outcome   | Subject outcome   | Method of verification                                  |
|   | [K6_U03] can design, according to required specifications, and make a simple device, facility, system or carry out a process, specific to the field of study, using suitable methods, techniques, tools and materials, following engineering standards and norms, applying technologies specific to the field of study and experience gained in the professional engineering environment | Student is able to design a mobile application utilizing data processing techniques.  | [SU4] Assessment of ability to use methods and tools    |
|   | [K6_W04] Knows and understands, to an advanced extent, the principles, methods and techniques of programming and the principles of computer software development or programming devices or controllers using microprocessors or programmable elements or systems specific to the field of study, and organisation of systems using computers or such devices                             | Student is able to develop a mobile application utilizing data processing techniques.   | [SW2] Assessment of knowledge contained in presentation |
|   | [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   | Student is able to properly utilize tools and methods in order to solve tasks.  | [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 | Student is able to properly design the test scenario of the investigated scientific problem.   | [SU3] Assessment of ability to use knowledge gained from the subject  |   |
| Subject contents  | <p>Application architecture for Android Studio<br/> Communication models for mobile technologies<br/> Wireless technologies (WiFi, Bluetooth, GSM)<br/> Security of data in the context of mobile devices</p>  |   |   |
| Prerequisites and co-requisites   |  |   |   |
| Assessment methods and criteria   | Subject passing criteria   | Passing threshold   | Percentage of the final grade                           |
|   | Laboratory   | 60.0%   | 60.0%   |
|   | Lecture  | 51.0%   | 40.0%   |
| Recommended reading   | Basic literature   | Mobile Computing and Wireless Communications: Applications, Networks, Platforms, Architectures, and Security <a href="#">Amjad Umar</a> , 2004  |   |
|   | Supplementary literature   | <ul style="list-style-type: none"> <li>Zimmerman, James B. "Mobile Computing: Characteristics, Business Benefits, and Mobile Framework" April 2, 1999. <a href="http://ac-support.europe.umuc.edu/~meinkej/inss690/zimmerman/INSS%20690%20CC%20-%20Mobile%20Computing.htm">http://ac-support.europe.umuc.edu/~meinkej/inss690/zimmerman/INSS%20690%20CC%20-%20Mobile%20Computing.htm</a></li> <li>Koudounas, Vasilis. Iqbal, Omar. "Mobile Computing: Past, Present, and Future" <a href="http://www.doc.ic.ac.uk/~nd/surprise_96/journal/vol4/vk5/report.html">http://www.doc.ic.ac.uk/~nd/surprise_96/journal/vol4/vk5/report.html</a></li> </ul> |   |
|   | eResources addresses   | Adresy na platformie eNauzanie:   |   |
| Example issues/<br>example questions/<br>tasks being completed  |  |   |   |
| Work placement  | Not applicable   |   |   |