

**Subject card**

|  |  |  |                     |                                     |   |            |     |
|--|--|--|---------------------|-------------------------------------|---|------------|-----|
| <b>Subject name and code</b>                       | IT Management Support Systems in Healthcare, PG_00155968   |  |                     |                                     |   |            |     |
| <b>Field of study</b>                              | Management of Healthcare Institutions  |  |                     |                                     |   |            |     |
| <b>Date of commencement of studies</b>             | October 2026   | <b>Academic year of realisation of subject</b>           |                     |                                     | 2026/2027   |            |     |
| <b>Education level</b>                             | Bachelor's studies   | <b>Subject group</b>                                     |                     |                                     | Obligatory subject group in the field of study<br>Subject group related to practical vocational preparation |            |     |
| <b>Mode of study</b>                               | full-time studies  | <b>Mode of delivery</b>                                  |                     |                                     | at the university   |            |     |
| <b>Year of study</b>                               | 1  | <b>Language of instruction</b>                           |                     |                                     | Polish  |            |     |
| <b>Semester of study</b>                           | 2  | <b>ECTS credits</b>                                      |                     |                                     | 2.0   |            |     |
| <b>Learning profile</b>                            | practical  | <b>Assessment form</b>                                   |                     |                                     | credit  |            |     |
| <b>Conducting unit</b>                             | Department of Investment and Real Estate -> Faculty of Management -> Rector                              |  |                     |                                     |   |            |     |
| <b>Name and surname of lecturer (lecturers)</b>    | <b>Subject supervisor</b>  |  | dr Dariusz Krlewski |                                     |   |            |     |
|  | <b>Teachers</b>  |  |                     |                                     |   |            |     |
| <b>Lesson types</b>                                | <b>Lesson type</b>   | Lecture  | Tutorial            | Laboratory                          | Project   | Seminar    | SUM |
|  | <b>Number of study hours</b>   | 15.0   | 0.0                 | 0.0                                 | 0.0   | 0.0        | 15  |
|  | E-learning hours included: 0.0   |  |                     |                                     |   |            |     |
| <b>Learning activity and number of study hours</b> | <b>Learning activity</b>   | Participation in didactic classes included in study plan |                     | Participation in consultation hours |   | Self-study | SUM |
|  | <b>Number of study hours</b>   | 15   |                     | 5.0                                 |   | 30.0       | 50  |
| <b>Subject objectives</b>                          | The lecture is devoted to that part of computer science that is related to its applications in medicine. |  |                     |                                     |   |            |     |

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| Learning outcomes   | Course outcome  | Subject outcome   | Method of verification            |
|   | [ZISZL3_U06] The student is able to identify, forecast and simulate selected economic and social phenomena in relation to the macro scale (economy, demography, health), as well as in micro terms (medical entities) using methods and tools applied in management.  | the student is able to indicate the factors forcing the development of medical informatics the student is able to list and describe medical computer systems the student is able to describe the role of databases and computer networks in health care units   | [SU4] test/exam - oral or written |
|   | [ZISZL3_U05] The student is able to correctly select and apply methods and tools used, inter alia, in management and quality sciences, economics, sociology adequate to the problem and specificity of management of medical entities.  | the student is able to indicate the factors forcing the development of medical informatics the student is able to list and describe medical computer systems the student is able to describe the role of databases and computer networks in health care units   | [SU4] test/exam - oral or written |
|   | [ZISZL3_W09] The student has knowledge of health care units, determinants shaping the effectiveness of their activities, taking into account regional and international aspects.  | student distinguishes between the roles of the computer in health care student characterizes specialized medical databases student learns methods of computer analysis and processing of medical data   | [SW4] test/exam - oral or written |
|   | [ZISZL3_K02] The student applies an analytical approach to problem solving, is able to independently search for solutions, as well as use expert opinions.  | the student deepens his knowledge of medical informatics the student appreciates the role of medical informatics in the functioning of health care the student demonstrates responsibility for the effectiveness of the IT implementation process   | [SK4] test/exam - oral or written |
|   | [ZISZL3_K03] The student recognizes the complexity of social problems in the field of health care at the micro- and macro-structural level.   | the student deepens his knowledge of medical informatics the student appreciates the role of medical informatics in the functioning of health care the student demonstrates responsibility for the effectiveness of the IT implementation process   | [SK4] test/exam - oral or written |
| [ZISZL3_W03] The student knows and understands to an advanced degree the functions of management and the role of managers in their implementation, as well as ways to achieve the goals of health care units. | student distinguishes between the roles of the computer in health care student characterizes specialized medical databases student learns methods of computer analysis and processing of medical data   | [SW4] test/exam - oral or written   |                                   |
| Subject contents  | -Why learn about medical informatics? -Different roles of computer in healthcare -Computers in hospital administration -Specialized medical databases -Methods of computer analysis and processing of medical data -Information systems related to medical images -Computer networks in medical informatics - Telemedicine -Security issues in medical informatics systems. |   |                                   |
| Prerequisites and co-requisites   |   |   |                                   |
| Assessment methods and criteria   | Subject passing criteria  | Passing threshold   | Percentage of the final grade     |
|   | exam  | 51.0%   | 100.0%                            |
| Recommended reading   | Basic literature  | <p>K. R. Ong, Medical Informatics: An Executive Primer, Third Edition, HIMSS Publishing, 2015</p> <p>S. Biedermann, Introduction to Healthcare Informatics, AHIMA, 2017</p> <p>R. E. Hoyt, W. R. Hersh, Health Informatics: Practical Guide, Seventh Edition, Lulu.com, 2018</p> <p>R. Zajdel, E. Kaćki, P.S. Szczepaniak, M. Kurzyński, Kompendium informatyki medycznej, Alfa-medica Press, Bielsko-Biała, 2003</p> |                                   |

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|  | Supplementary literature | W. Trąbka, W. Komnata, L. Stalmach, A. Koziarkiewicz, Szpitalne systemy informatyczne, Vesalius, 1997<br><br>E.H. Shortliffe, G.O. Barnett, Medical Data: Their Acquisition, Storage, and Use, w Edward H. Shortliffe Leslie E. Perreault, Medical Informatics. Computer Applications in Health Care and Biomedicine, Second Edition, Springer, 2001 |
|  | eResources addresses     |  |
| Example issues/<br>example questions/<br>tasks being completed |                          |  |
| Work placement   | Not applicable           |  |

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