

## Subject card

|                                             |                                                                                                                                                                                                                                                                                           |                                                          |                                                                                                                       |                                     |                                                                                              |            |     |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------------------------------------------------------------------------------------------|------------|-----|
| Subject name and code                       | Real Estate Technical Management, PG_00178236                                                                                                                                                                                                                                             |                                                          |                                                                                                                       |                                     |                                                                                              |            |     |
| Field of study                              | Management                                                                                                                                                                                                                                                                                |                                                          |                                                                                                                       |                                     |                                                                                              |            |     |
| Date of commencement of studies             | October 2025                                                                                                                                                                                                                                                                              |                                                          | Academic year of realisation of subject                                                                               |                                     | 2027/2028                                                                                    |            |     |
| Education level                             | Bachelor's 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                               | 3                                                                                                                                                                                                                                                                                         |                                                          | Language of instruction                                                                                               |                                     | Polish                                                                                       |            |     |
| Semester of study                           | 6                                                                                                                                                                                                                                                                                         |                                                          | ECTS credits                                                                                                          |                                     | 7.0                                                                                          |            |     |
| Learning profile                            | academic                                                                                                                                                                                                                                                                                  |                                                          | Assessment form                                                                                                       |                                     | exam                                                                                         |            |     |
| Conducting unit                             | Department of Investment and Real Estate -> Faculty of Management -> Rector                                                                                                                                                                                                               |                                                          |                                                                                                                       |                                     |                                                                                              |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                                                                                                                                                        |                                                          | dr hab. inż. Małgorzata Rymarzak                                                                                      |                                     |                                                                                              |            |     |
|                                             | Teachers                                                                                                                                                                                                                                                                                  |                                                          |                                                                                                                       |                                     |                                                                                              |            |     |
| Lesson types                                | Lesson type                                                                                                                                                                                                                                                                               | Lecture                                                  | Tutorial                                                                                                              | Laboratory                          | Project                                                                                      | Seminar    | SUM |
|                                             | Number of study hours                                                                                                                                                                                                                                                                     | 30.0                                                     | 30.0                                                                                                                  | 15.0                                | 0.0                                                                                          | 0.0        | 75  |
|                                             | 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                                                                                                                                                                                                                                                                     | 75                                                       |                                                                                                                       | 4.0                                 |                                                                                              | 96.0       | 175 |
| Subject objectives                          | The aim of the course is to synthetically present issues related to the technical management of real estate in order to prepare students to pursue professions related to real estate management, in particular real estate valuation and management, as well as the development process. |                                                          |                                                                                                                       |                                     |                                                                                              |            |     |
| Learning outcomes                           | Course outcome                                                                                                                                                                                                                                                                            |                                                          | Subject outcome                                                                                                       |                                     | Method of verification                                                                       |            |     |
|                                             | [ZARZL3_U04] The student can correctly select and properly apply methods and tools from management and quality sciences, as well as economics and finance, to decision-making processes.                                                                                                  |                                                          | The student uses appropriate methods and tools in the process of technical management of real estate.                 |                                     | [SU4] test/exam - oral or written<br>[SU5] implementation of a problem task                  |            |     |
|                                             | [ZARZL3_W06] The student has advanced knowledge and understanding of the principles of rational decision-making about individual resources, functional areas in the organization, processes, and management levels.                                                                       |                                                          | The student identifies the principles of rational decision-making related to the technical management of real estate. |                                     | [SW4] test/exam - oral or written                                                            |            |     |
|                                             | [ZARZL3_U03] The student can obtain data from properly selected and verified sources and use these data to analyse and evaluate economic processes and phenomena.                                                                                                                         |                                                          | The student uses the appropriate data to prepare a cost estimate (using Norma Pro software).                          |                                     | [SU2] presentation/project/paper/report                                                      |            |     |
| Subject contents                            | Introduction to Technical Management of Real Estate<br>Overview of Modern Technologies Used in Buildings<br>Operation and Technical Maintenance of Real Estate<br>Diagnostics and Technical Assessment of Buildings<br>Construction Cost Analysis                                         |                                                          |                                                                                                                       |                                     |                                                                                              |            |     |

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| Prerequisites and co-requisites |                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |
| Assessment methods and criteria | Subject passing criteria                                       | Passing threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Percentage of the final grade |
|                                 | Written colloquium                                             | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 30.0%                         |
|                                 | Project                                                        | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 20.0%                         |
|                                 | Written exam                                                   | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 50.0%                         |
| Recommended reading             | Basic literature                                               | <div>1. Popek M., Wapińska B., Podstawy budownictwa. Podręcznik, WSiP, Warszawa 2013.</div> <div>2. Rymarzak M., Zarządzanie nieruchomościami przedsiębiorstw w Polsce, CeDeWu, Warszawa 2009, rozdział 2.</div> <div>3. Maj T., Sporządzanie kosztorysów, WSiP, Warszawa 2015.</div> <div>4. Korzeniewski W., Zasady obmiaru i obliczania powierzchni i kubatury budynków, POLCEN, Warszawa 2011.</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                               |
|                                 | Supplementary literature                                       | <div>1. Popek M., Wapińska B., Budownictwo ogólne. Podręcznik, WSiP, Warszawa 2013.</div> <div>2. Kowalczyk Z., Zabielski J., Kosztorysowanie i normowanie w budownictwie, WSiP, Warszawa 2011.</div> <div>3. Ustawa z dnia 7 lipca 1994 r. Prawo budowlane (Dz. U. 1994 Nr 89 poz. 414 z późn. zm.).</div> <div>4. Fabijański M., Kacprzyk B., Sielewicz O., Metody kosztorysowania robót budowlanych, WACETOB, Warszawa 2008.</div> <div>5. Pliszka E. (red.) Vademecum budowlane, Arkady Warszawa 2001.</div> <div>6. Warunki kontraktu na realizację EPC/pod-klucz (FIDIC zielony edycja 1999), Wydawnictwo Cosmopoli, Warszawa 2000.</div> <div>7. Warunki Kontraktu na Budowę (FIDIC czerwony edycja 2017), Wydawnictwo SIDiR, Warszawa 2017.</div> <div>8. Warunki Kontraktu na urządzenia i budowę z projektowaniem (FIDIC żółty edycja 2017), Wydawnictwo SIDiR, Warszawa 2017.</div> <div>9. Warunki Kontraktowe FIDIC dla projektowania, budowy i obsługi (FIDIC złoty edycja 2008), Wydawnictwo SIDiR, Warszawa 2010.</div> |                               |
|                                 | eResources addresses                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |
|                                 | Example issues/<br>example questions/<br>tasks being completed |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |
| Work placement                  | Not applicable                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                               |

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