



Subject card

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|---|---|--|---|-------------------------------------|--|------------|-----|
| Subject name and code | Models in spatial development, PG_00053456 | | | | | | |
| Field of study | Spatial Development | | | | | | |
| Date of commencement of studies | February 2024 | | Academic year of realisation of subject | | 2024/2025 | | |
| Education level | second-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 | 2 | | ECTS credits | | 2.0 | | |
| Learning profile | general academic profile | | Assessment form | | assessment | | |
| Conducting unit | Department of Urban Design and Regional Planning -> Faculty of Architecture | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr inż. Robert Skrzypczyński | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 30.0 | 0.0 | 0.0 | 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 | To acquaint students with various types of models used in spatial management, methods of their creation and application. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | K7_U02 | | Student indicates the place and method of applying models in the process of urban planning and regional planning. | | [SU3] Assessment of ability to use knowledge gained from the subject | | |
| | K7_U04 | | Student chooses a quantitative model, appropriate to the conditions and tasks related to spatial management | | [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject | | |
| Subject contents | <div>1. The concept and types of models and their role.</div> <div>2. Iconographic and descriptive (ideological, conceptual) models concerning cities historical and contemporary.</div> <div>3. Models in urban, region and country planning - creation and application.</div> <div>4. Models of tourism development.</div> <div>5. Systemic views of cities and other social territorial systems.</div> <div>6. Population models.</div> <div>7. Partial and comprehensive quantitative models (mathematical and simulation models of cities): model classifications, Lowry model, models: gravity, flow, Land-Use Transportation Interactions (LUTI), cellular automata, Agent-Based Models, microsimulation models. The paradigm of Zipser spatial decisions, ORION.</div> <div>8. Models of regional growth.</div> <div>9. Spatial processes, selected theories of spatial management - model approaches.</div> <div>10. City control models.</div> <div>11. Application of models in scenarios.</div> | | | | | | |
| Prerequisites and co-requisites | | | | | | | |
| Assessment methods and criteria | Subject passing criteria | | Passing threshold | | Percentage of the final grade | | |
| | Colloquium (test) | | 50.0% | | 90.0% | | |
| | Activity during lectures - tests (quizzes) | | 50.0% | | 10.0% | | |

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| Recommended reading | Basic literature | <ol style="list-style-type: none"> 1. Domański R., Gospodarka przestrzenna. Podstawy teoretyczne (chapter 9), WN PWN, Warszawa 2006. 2. Malisz B., Teoria kształtowania układów osadniczych, Arkady, Warszawa 1981. 3. Mironowicz I., Modele transformacji miast, Oficyna Wyd. Politechniki Wrocławskiej, Wrocław 2016. 4. Prezentacje do wykładów (PDF files). |
| | Supplementary literature | <ol style="list-style-type: none"> 1. Majda T., Mironowicz I. (Eds.), Manifesty urbanistyczne, Biblioteka Urbanisty 15, Warszawa 2017. 2. Shi, W., Goodchild, M., Batty, M., Kwan, M.-P., Zhang, A. (Eds.), Urban Informatics, Springer, 2021 3. Suhecki B., Ekonometria przestrzenna. Metody i modele analizy danych przestrzennych, Wyd. C.H, Beck, 2010 4. van Nes, A., Yamu, C., Introduction to Space Syntax in Urban Studies, Springer, 2021. 5. Zipser T, Sławski J. Modele procesów urbanizacji, Studia KPZK PAN t. XCVII, PWE, Warszawa 1988. |
| | eResources addresses | Adresy na platformie eNauczenie: |
| Example issues/ example questions/ tasks being completed | <ol style="list-style-type: none"> 1. Types of models from the point of view of: the way of expressing reality / the goals of their construction 2. In which phases of the planning process the models can be used? 3. What can models refer to in designing the spatial structure of the city? 4. What submodels does the LUTI Model contain? 5. What can simulation models be used for? | |
| Work placement | Not applicable | |