



Subject card

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|---|---|--|-------------------------------------|------------|---------|---------|-----|
| Subject name and code | , PG_00060394 | | | | | | |
| Field of study | Spatial Development | | | | | | |
| Date of commencement of studies | October 2022 | Academic year of realisation of subject | 2022/2023 | | | | |
| Education level | first-cycle studies | Subject group | | | | | |
| 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 | 1.0 | | | | |
| Learning profile | general academic profile | Assessment form | assessment | | | | |
| Conducting unit | Department of Technical Fundamentals of Architecture Design -> Faculty of Architecture | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | prof. dr hab. inż. Andrzej Kulowski | | | | | |
| | Teachers | prof. dr hab. inż. Andrzej Kulowski | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15 |
| | 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 | 15 | 0.0 | 0.0 | 15 | | |
| Subject objectives | <p>Awareness of noise hazard in spatial planning issues</p> <p>Knowledge about the commitment of local authorities to consider noise protection when planning, including Poland's international obligations in this regard.</p> <p>Understanding the relationship between the extent of noise hazard to the site and the degradation of the site's function.</p> <p>Ability to determine the scope of studies on environmental hazards associated with noise and use them</p> | | | | | | |

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| Learning outcomes | Course outcome | Subject outcome | Method of verification |
| | [K6_U05] correctly interprets natural phenomena, and when formulating and solving engineering tasks related to spatial management, notices their systemic and non-technical aspects related to the natural environment | He analyzes studies in the field of spatial management with the awareness of legal regulations regarding the threat to the environment by noise. He understands and is able to apply the regulations on acoustic environmental protection. He understands the purposefulness of changes in the regulations on environmental acoustics in the context of development trends in the field of spatial planning and related disciplines. Can track changes in the legal status regarding environmental acoustics. | [SU3] Assessment of ability to use knowledge gained from the subject |
| | [K6_W04] has basic knowledge in the field of pro-ecological design and knows the principles of sustainable development of cities and regions; has knowledge of the natural foundations of spatial management and the impact of natural conditions on the processes of economic development on a local, regional and national scale | He analyzes studies in the field of spatial management with the awareness of legal regulations regarding the threat to the environment by noise. He understands and is able to apply the regulations on acoustic environmental protection. He understands the purposefulness of changes in the regulations on environmental acoustics in the context of development trends in the field of spatial planning and related disciplines. Can track changes in the legal status regarding environmental acoustics. | [SW1] Assessment of factual knowledge |
| Subject contents | 1. Impact of noise and vibration on humans. 2. Subjective and objective assessment of noise and vibration. 3. Parameters of sound evaluation, sound spectrum, decibel. 4. European Union directives and harmonization of regulations in EU countries in the field of environmental protection against noise. 5. Legal status as regards the permissible level of noise and vibrations in the environment. 6. Noise propagation in open space. Transport, industrial and domestic noise. 7. Acoustic screens. 8. Noise of wind electro-farms. 9. Airplane noise, limited use area. 10. Parameters and standards of acoustic climate. Acoustic zones of cities. 11. Noise maps, the use of noise maps in planning activities. 12. Acoustics in planning documents - Environmental report, Project Information Card, Local Spatial Development Plan. 13. Noise protection program in the Tri-City. 14. Elements of building acoustics - building protection against external noise. | | |
| Prerequisites and co-requisites | | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | test | 60.0% | 100.0% |
| Recommended reading | Basic literature | Sadowski J., "Podstawy akustyki urbanistycznej". Arkady, Warszawa 1982 Sadowski J., "Akustyka architektoniczna". PWN, Warszawa 1976. Sadowski J., "Akustyka w urbanistyce, architekturze i budownictwie". Arkady, Warszawa 1971. | |
| | Supplementary literature | Ciesielski J., Kawecki J., Maciąg E., Ocena wpływu wibracji na budowle i ludzi w budynkach. Instytut Techniki Budowlanej, Warszawa 1993 | |
| | eResources addresses | Adresy na platformie eNauczanie: | |
| Example issues/ example questions/ tasks being completed | Give an example of the scope of expertise regarding the assessment of environment acoustic hazards . Explain the relationship between the degree of terrain noise hazard and the degradation of terrain functions. List sample project studies on environmental acoustics. | | |
| Work placement | Not applicable | | |