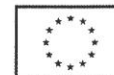




COURSE DESCRIPTION

RAR
 (3)
 Politechnika Śląska
 Wydział Architektury
 (faculty stamp) NAT
 44-100 Gliwice, ul. Akademicka 7
 Tel. 237 12 10, 237 27 28, 237 24 91

| | |
|---|--|
| 1. Course title: METHODOLOGY OF SCIENTIFIC WORK | 2. Course code: RAr-A-SSII-II-MoSW |
| 3. Validity of course description: 2018/2019 | |
| 4. Level of studies: MSc programme | |
| 5. Mode of studies: Full-time studies | |
| 6. Field of study: Architecture | |
| 7. Profile of studies: general academic profile | |
| 8. Programme: - | |
| 9. Semester: 2 | |
| 10. Faculty teaching the course: Faculty of Architecture, Department of Design and Qualitative Research in Architecture | |
| 11. Course instructor: Agnieszka Bugno-Janik PhD. Arch. Eng. | |
| 12. Course classification: general | |
| 13. Course status: compulsory | |
| 14. Language of instruction: English | |
| 15. Pre-requisite qualifications: none | |
| 16. Course objectives: To understand the Architecture as a science from the perspective of the methodology and philosophy of science; the role of scientific research in Architecture; the field and methods of research. To understand difference between pure science and applied research and the consequences for design process. To understand the inference process, data gathering, analysis and synthesis and conclusions drawing. To learn methods of reasoning (induction, deduction, abduction) and understand the process of acquiring knowledge and constructing theories in science. To be able to state, plan and design the research project and to construct methods and tools for chosen research problem. To understand how social sciences research methods can be used for researching the problems related to architectural and urban space. To learn how to communicate research outcomes – to construct the scientific text and research report. To understand the role of science in society and for the architectural profession. To understand the problems of ethics of scientific research. | |
| 17. Description of learning outcomes: | |



| Nr | Learning outcomes description | Method of assessment | Teaching methods | Learning outcomes reference code |
|----|---|----------------------|---|----------------------------------|
| 1 | Student is able to clearly state the research problem, determine method and build a plan for the research project. | Research plan | Lecture, seminar discussion, group work | K2A-W12 |
| 2 | Student is able to use appropriate methods of reasoning and inference, to draw conclusion adequate to collected data. | Research report | Seminar, group work | K2A-W12 K2A-U08 |
| 3 | Student know which methods of research are adequate to different types of research situations. | written test | Seminar discussion, | K2A-W12 K2A-U04 K2A-U08 |
| 4 | Student can conduct simple research, (e.g. Post-Occupancy Evaluation and use it for design. | Research report | | K2A-U05 K2A-U06 K2A-U04 |
| 5 | Student understands the ethical problems of research. | written test | lecture/seminar | K2A-W08 K2A-U08 |
| 6 | Students is able to communicate, discuss and respond to critics of his research. | Oral presentation | seminar/lecture | K2A-W08 K2A-K14 |

18. Teaching modes and hours

Lecture 15/ BA /MA Seminar 30/ Class / Project / Laboratory

19. Syllabus description:

Lectures:

7 lectures covering topics:

Architecture from the perspective of general philosophy and methodology of science. Architecture as preparadigmatic science, the problems and possible development.
 Scientific reasoning and inference from the perspective of research in architecture. Methods of reasoning – deduction, induction, abduction. Architectural famous research examples and the problem of scientific conclusion drawing and theory building. Case study in architecture. Qualitative versus quantitative research methods. Pure science versus applied research and pre-design research. POE, participatory action research and grounded theory – as the exemplars of different methodological perspectives on research subject and object. Applied research in architecture example - building design programme according to POE outcomes.
 Research ethical problems.
 Urban space and social sciences methods – how to make proper use of social sciences research outcomes in the field of architecture. Social science methods and tools adaptation for urban space research.
 8th lecture – students group presentations of research outcomes

Seminar:

There will be about 7 seminars (90 minutes each) and 1 or 2 group workshops (8 hours in total - it depends on the problem chosen by students) consisting of: group discussions and work on research projects stated according to students own interests (subject, hypothesis, research question stating – in discussion; choosing research method;



developing research tools - workshop; and short field research to test chosen methods and tools; then inference and critique – workshop, discussion).

20. Examination: no

21. Primary sources:

Bell, P.A. (Ed.), 1996. Environmental psychology, 4th ed. ed. Harcourt Brace College Publishers, Fort Worth.
 Groat, L.N., Wang, D., 2013. Architectural Research Methods. John Wiley & Sons.
 Jong, T.M. de, Voordt, D.J.M. van der, 2002. Ways to Study and Research: Urban, Architectural, and Technical Design. IOS Press.
 Lang, J.T., 1987. Creating Architectural Theory: The Role of the Behavioral Sciences in Environmental Design. Van Nostrand Reinhold Company.
 Niezabitowska, E.D., 2018. Research Methods and Techniques in Architecture. Routledge.
 Preiser, W.F.E., White, E., Rabinowitz, H., 2015. Post-Occupancy Evaluation (Routledge Revivals). Routledge.
 Zeisel, J., 1984. Inquiry by Design: Tools for Environment-Behaviour Research. CUP Archive.

22. Secondary sources:

Glaser, B.G., Strauss, A.L., 2009. The Discovery of Grounded Theory: Strategies for Qualitative Research. Transaction Publishers.
 Hall, E.T., 1990. The silent language. Doubleday.
 Hall, E.T., 1969. The Hidden Dimension: An Anthropologist Examines Man's Use of Space in Public and in Private. Anchor Books.
 Kuhn, T.S., 2012. The Structure of Scientific Revolutions: 50th Anniversary Edition. University of Chicago Press.
 Lynch, K., 1960. The Image of the City. MIT Press.
 Passini, R., 1992. Wayfinding in architecture. Van Nostrand Reinhold.
 Rapoport, A., 1969. House form and culture. Prentice-Hall.
 Tuan, Y.-F., 1977. Space and Place: The Perspective of Experience. E. Arnold.

23. Total workload required to achieve learning outcomes

| Lp. | Teaching mode : | Contact hours / Student workload hours |
|-----|-----------------------|--|
| 1 | Lecture | 15/5 |
| 2 | Classes | |
| 3 | Laboratory | |
| 4 | Project | |
| 5 | BA/ MA Seminar | 30/40 |
| 6 | Other | 25/5 |
| | Total number of hours | 70/50 |

24. Total hours: 120

25. Number of ECTS credits: 4


26. Number of ECTS credits allocated for contact hours: 3

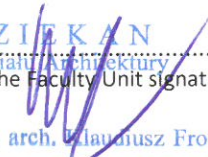
27. Number of ECTS credits allocated for in-practice hours (laboratory classes, projects): 3

26. Comments:



Approved:

26.09.18 
.....
(date, Instructor's signature)

DZIEKAN
Wydziału Architektury
.....
(date, the Director of the Faculty Unit signature)
dr hab. inż. arch.  Klaudiusz Fross