**Syllabus of an educational component of a degree programme**

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| Name of unit conducting a component | ***Doctoral School of Social Sciences*** |
| Name of an educational component | **Interdisciplinary research project**  (Interdyscyplinarny projekt badawczy) |
| Language of education | English |
| Goals of education | The course’s general purpose is to amplify doctoral students’ competences in understanding, planning, pursuing, and evaluating interdisciplinary research, with particular emphasis on projects involving social sciences. This purpose implies, among other things, the acquisition of knowledge on foundations of interdisciplinarity, gains, and risks of interdisciplinary research, as well as practical skills directly connected with interdisciplinary research, as selecting disciplines of interest, building interdisciplinary team, searching for research funding, and preparing referee reports of interdisciplinary studies. |
| Learning outcomes of an educational component | *Knowledge*:  -The student knows and understands—to the extent allowing to shift the existing paradigms—the worldwide scientific achievements involving theoretical foundations as well as general and specific problems of interdisciplinary research, especially concerning social sciences [in reference to W1].  -The student knows and understands the methodology of interdisciplinary research [in reference to W4].    *Skills:*  -The student is able to use knowledge derived from various fields of science in order to creatively identify, formulate and solve complex problems (or perform research tasks) in an innovative way [in reference to U1].  -The student is able, using background knowledge in hand, to make a critical analysis and evaluation of the research results, expert activities, and other creative works and their contribution to the development of interdisciplinary knowledge [in reference to U2].  -The student is able to plan and implement individual and team interdisciplinary research projects, also in an international academic milieu [in reference to U4].  *Social competences:*  -The student is ready to recognize the importance of knowledge emerging from interdisciplinary studies in solving theoretical and practical problems [in reference to K2]. |
| Verification methods and assessment criteria of learning outcomes obtained by students | Learning outcomes will be assessed on the basis of (1) active participation in classes, (2) preparation and delivering of two presentations during the semester, namely, concerning (2.1) selected aspect of interdisciplinary research (see T1-T12), and (2.2) student’s project using the interdisciplinary methodology. 2.1 & 2.2 should be prepared in student groups. |
| Type of an educational component (obligatory/optional) | optional |
| Year of study | 1st |
| Semester | Summer (2nd) semester |
| Name and surname of the coordinator of a component and/or person/s conducting a component | Mateusz Hohol, Ph.D. |
| Name and surname of person/s conducting an examination or granting credit | Mateusz Hohol, Ph.D. |
| Manner of completion | Graded credit / Standard grading scales |
| Preliminary and additional requirements | No prerequisites are required |
| Type and number of hours of courses requiring  direct participation of academic staff and students, if in a given component such courses are included | Workshop – 30 h |
| Number of ECTS credits assigned to a component | 3 ECTS |
| Balance of ECTS credits | a) Participation in classes:  -workshop: 30h  b) Student’s own work:  -Reading recommended publications: 30h  -Preparation of the project & presentation: 30h  In total: 120h = 3 ECTS |
| Applied teaching methods | Workshop involving the following methods: introductory lecture with presentation, conversatory lecture, discussion, case studies, student’s projects |
| Form and conditions of passing a component, including conditions of allowing to take an examination, as well as form and conditions of passing each type of courses included in a given component | To pass the course the student should (1) actively participate in the classes, (2) prepare and deliver two presentations during the semester, namely, concerning (2.1) selected aspect of interdisciplinary research (see T1-T12), and (2.2) student’s project using the interdisciplinary methodology. 2.1 & 2.2 should be prepared in groups. Fulfilling (1), (2.1) and (2.2) are necessary conditions for passing the course. Final assessment depends on the quality of (2.1) and (2.2). |
| Content of an educational module (with division into forms of courses completion) | (T0) Introduction to the course: Why interdisciplinarity?  (T1) What scientific discipline actually is?  (T2) History of interdisciplinarity  (T3) Cleaning up the conceptual mess: Many faces of interdisciplinarity  (T4) Is interdisciplinarity a pipe dream? A case of cognitive science  (T5) Toward integrative sciences: A case of climate science  (T6) Scientometrics of interdisciplinary research  (T7) What makes interdisciplinarity difficult?  (T8) Facilitating interdisciplinary research  (T9) Searching for funding and venue of publication of interdisciplinary research  (T10) How to build and maintain an interdisciplinary team?  (T11) Evaluating interdisciplinary research  (T12) Administering an interdisciplinary program  (T13) Discussion of students’ projects  (T14) Summary of the course |
| List of basic as well as supplementary literature, knowledge of which is required in order to pass a given component | **Basic literature:**  (T1.1) Stichweh, R. (2001). Scientific disciplines, history of. *International Encyclopedia of the Social & Behavioral Sciences* (pp. 3727–13731). New York: Elsevier. <https://doi.org/10.1016/b0-08-043076-7/03187-9>  (T1.2) Jacobs, J. A. (2017). The need for disciplines in the modern research university. W: Froeman, R., Thompson Klein, J., & Pacheco, R. S. C. (Eds.). (2017). *The Oxford Handbook of Interdisciplinarity* (2nd ed.). Oxford: Oxford University Press.  (T1.3) Stichweh, R. (1992). The sociology of scientific disciplines: On the genesis and stability of the disciplinary structure of modern science. *Science in Context*, *5*(1), 3–15. <https://doi.org/10.1017/S0269889700001071>  (T2.1) Ash, M. G. (2019). Interdisciplinarity in historical perspective. *Perspectives on Science*, *27*(4), 619–642. <https://doi.org/10.1162/posc_a_00318>  (T3.1) Van Den Besselaar, P., & Heimeriks, G. (2001). Disciplinary, multidisciplinary, interdisciplinary: Concepts and indicators. In M. Davis & C. S. Wilson (Eds.) *Proceedings of the 8th International Conference on Scientometrics & Informetrics* (ISSI) (pp. 705–716). Sydney: University of New South Wales.  (T3.2) Klein, J. T. (2017). Typologies of interdisciplinarity: The boundary work of definition. W: Froeman, R., Thompson Klein, J., & Pacheco, R. S. C. (Eds.). (2017). T*he Oxford Handbook of Interdisciplinarity* (2nd ed.). Oxford: Oxford University Press.  (T4.1) Núñez, R., Allen, M., Gao, R., Miller Rigoli, C., Relaford-Doyle, J., & Semenuks, A. (2019). What happened to cognitive science? *Nature Human Behaviour*, *3*(8), 782–791. <https://doi.org/10.1038/s41562-019-0626-2>  (T4.2) Gentner, D. (2019). Cognitive science is and should be pluralistic. *Topics in Cognitive Science*, 11(4), 884–891. <https://doi.org/10.1111/tops.12459>  (T5.1) Shamana, J., Solomon, S., Colwell, R. R., & Field, C. B. (2013). Fostering advances in interdisciplinary climate science. *Proceedings of the National Academy of Sciences of the United States of America*, *110*, 3653–3656. <https://doi.org/10.1073/pnas.1301104110>  (T5.2) Milman, A., Marston, J. M., Godsey, S. E., Bolson, J., Jones, H. P., & Weiler, C. S. (2017). Scholarly motivations to conduct interdisciplinary climate change research. *Journal of Environmental Studies and Sciences*, *7*(2), 239–250. <https://doi.org/10.1007/s13412-015-0307-z>  (T6.1) Yegros-Yegros, A., Rafols, I., & D’Este, P. (2015). Does interdisciplinary research lead to higher citation impact? The different effect of proximal and distal interdisciplinarity. *PLoS ONE*, *10*(8), 1–21. <https://doi.org/10.1371/journal.pone.0135095>  (T6.2) Van Rijnsoever, F. J., & Hessels, L. K. (2011). Factors associated with disciplinary and interdisciplinary research collaboration. *Research Policy*, *40*(3), 463–472. <https://doi.org/10.1016/j.respol.2010.11.001>  (T7.1) MacLeod, M. (2018). What makes interdisciplinarity difficult? Some consequences of domain specificity in interdisciplinary practice. *Synthese*, *195*(2), 697–720. <https://doi.org/10.1007/s11229-016-1236-4>  (T7.2) Buanes, A., & Jentoft, S. (2009). Building bridges: Institutional perspectives on interdisciplinarity. *Futures*, *41*(7), 446–454. <https://doi.org/10.1016/j.futures.2009.01.010>  (T8.1) Choi, B., & Pak, A. (2007). Multidisciplinarity, interdisciplinarity, and transdisciplinarity in health research, services, education and policy: 2. Promotors, barriers, and strategies of enhancement. *Clinical and Investigative Medicine*, *30*(6), 224–232.  (T8.2) Bruun, H., Hukkinen, J. I., Huutoniemi, K. I., & Thompson Klein, J. (2005). *Promoting Interdisciplinary Research: The Case of the Academy of Finland*. (Publications of the Academy of Finland; Vol. 2005, No. 8). Academy of Finland.  (T9.1) Konig, T., Gorman, M. E. (2017). The challenge of funding interdisciplinary research: A look inside public research funding agencies. W: Froeman, R., Thompson Klein, J., & Pacheco, R. S. C. (Eds.). (2017). *The Oxford Handbook of Interdisciplinarity* (2nd ed.). Oxford: Oxford University Press.  (T9.2) Turner, B. (2020). *ERC Approaches to Interdisciplinarity*. European Research Council, <https://www.scienceeurope.org/media/2jhph5i5/ben_turner_erc_and_interdisciplinarity.pdf>  (T10.1). Choi, B., & Pak, A. (2008). Multidisciplinarity, interdisciplinarity, and transdisciplinarity in health research, services, education and policy: 3. Discipline, inter-discipline distance, and selection of discipline. *Clinical and Investigative Medicine*, *31*(1), 41–48. <https://doi.org/10.25011/cim.v31i1.3140>  (T10.2) Lakhani, J., Benzies, K., & Hayden, K. A. (2012). Attributes of interdisciplinary research teams: A comprehensive review of the literature. *Clinical and Investigative Medicine*, *35*(5), 260–265. <https://doi.org/10.25011/cim.v35i5.18698>  (T11.1) Laudel, G. (2006). Conclave in the Tower of Babel: How peers review interdisciplinary research proposals. *Research Evaluation*, *15*(1), 57–68. <https://doi.org/10.3152/147154406781776048>  (T11.2) Holbrook, J. B. (2017). Peer review, interdisciplinarity, and serendipity. W: Froeman, R., Thompson Klein, J., & Pacheco, R. S. C. (Eds.). (2017). *The Oxford Handbook of Interdisciplinarity* (2nd ed.). Oxford: Oxford University Press.  (T12.1) Holley, K. (2017). Administering interdisciplinary programs. W: Froeman, R., Thompson Klein, J., & Pacheco, R. S. C. (Eds.). (2017). *The Oxford Handbook of Interdisciplinarity* (2nd ed.). Oxford: Oxford University Press.  **Supplementary literature:**  Aldrich, J. H. (2014). *Interdisciplinarity: Its role in a discipline-based academy*. Oxford: Oxford University Press.  Froeman, R., Thompson Klein, J., & Pacheco, R. S. C. (Eds.). (2017). *The Oxford Handbook of Interdisciplinarity* (2nd ed.). Oxford: Oxford University Press (remaining chapters).  Graff, H. J. (2015). *Undisciplining knowledge: Interdisciplinarity in the twentieth century*. Baltimore: Johns Hopkins University Press.  Thompson Klein, J. (1990). *Interdisciplinarity: History, theory, and practice*. Detroit: Wayne State University Press.  Weingart, P., & Stehr, N. (Eds.). (2000). *Practising interdisciplinarity*. Toronto: University of Toronto Press. |