

# SYLLABUS

1. Course title: **Climathon**
2. Course coordinator: **dr hab. Edyta Zawisza**
3. Field, type and level of studies, year of study: **Engineering and technology** (Dziedzina nauk inżynieryjno-technicznych) **and Natural sciences** (Dziedzina nauk ścisłych i przyrodniczych), **all years of study, undergraduate and postgraduate students (bachelor, master and PhD students)**
4. Course character: **elective-compulsory lecture**
5. Teaching method: **24h hackathon, workshop, lecture, system innovation**
6. Language: **English or Polish** depending on the audience
7. Course type and number of hours: **workshop and lecture (24h)**
8. Estimated load of student's independent work: **10h**
9. Total workload and number of ECTS points: **24h, 1 ECTS**

10. Short description and main focus of the course:

Climathon is a 24-hour hackathon established for climate change challenge taking place simultaneously in major cities around the world. The workshop is created in the cooperation of Górnośląska-Zagłębiowska Metropolia, Institute of Geological Sciences Polish Academy of Sciences and Climate-KIC. During 24h workshop participants will create real solutions to city's or region's climate challenge. Each year in the front of participants stand new challenge connected with climate change and/or low carbon economy. To Climathon students can join as group of students or individually (during the workshop will be also possibility to establish new group). Participation in Climathon is not requiring any previous knowledge. Important the best project will be attractive awarded.

**Climathon Workshop is going to take place at last Friday of October 2022**

11. References:

- Boulle M, Carp E, De Cuyper M, Tanghe J, Van de Craen B and Van Holte O. 2013. Visual Innovation Accelerator Tool book. How to ignite powerful innovation? Amsterdam, January 2013.
- Caniëls, M. C., & Romijn, H. A. 2008. Actor networks in strategic niche management: insights from social network theory. *Futures*, 40(7), 613-629.
- Carleton, Tammy Lee., Larry J. Leifer, Charles H. House, and Riitta Katila. 2011. The Value of Vision in Radical Technological Innovation. Thesis (Ph.D.)-Stanford University, 2011.
- de Vicente Javier and Sterrenberg Lydia 2015. Toolkit for socio- technical transition workshops. Utrecht 2015.
- de Vicente Lopez J and Matti C. 2016. Visual toolbox for system innovation. A resource book for practitioners to map, analyze and facilitate sustainability transitions. Transitions Hub Series. Climate-KIC, Brussels.
- Fantin I. Applied Problem Solving. Method, Applications, Root Causes, Countermeasures, Poka-Yoke and A3. How to make things happen to solve problems. CreateSpace

Independent Publishing Platform Ed. Milan 2014. Paperback 212 pp. ISBN 9781499122282.

Geels FW. 2002. Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case study. Res Policy 2002;31(8/9):1257-74.)

Krogerus M And Tschäppeler R. 2011. The decision Boom. Fifty models for strategic thinking. Profile Books LTD. London 2011.

Macanufu J. et al. 2010. Gamestorming: A Playbook for Innovators, Rulebreakers, and Changemakers. O'Reilly Media Ed. 2010 paperback, 290 pp., ISBN 9780596804176.

Narberus Mitcha, 2013. How to break out of the system trap? A model to support conversations for a more strategic activism. Discussion paper. SMARTCSOs, 2013.

12. Educational outcomes:

**KNOWLEDGE:** Students know the basic climatic features and as well basic knowledge about low carbon economy. They know the reasons and direction of climate change that took place in the last decades. They understand the basic terminology concerning the climate change and low carbon economy problems.

**PRACTICAL SKILLS:** Students are able to identify the most important climate and ecological problems. They are able to choose appropriate system innovation method for solve social and ecological problem. They are able to present graphically and numerically the analytical results based on system innovation tools. They are able to interpret the results and indicates their influence on climate and low carbon economy.

**SOCIAL SKILLS:** Students understand the impact of climate change on the ecosystem. They are able to assess the impact of the economy and industry on the environment and climate change. They are aware of the durability of changes introduced to the natural environment and the natural consequences of human activities. They are ready to work in a team in the field of professional tasks.

13. Evaluation of the educational outcomes: **project presentation**

14. Criteria to complete the course: **attendance**