



UNIwersytet GDAŃSKI



WYDZIAŁ ZARZĄDZANIA  
UNIwersytet GDAŃSKI

| Title   |        |         |           |          | Code:     |
|---|--------|---------|-----------|----------|-----------|
| Selected Aspects of Low Emission Economy - Renewable Energy and Green Buildings   |        |         |           |          | 4.0.2418  |
| ECTS points:  | Hours: | Year:   | Semester: | Status:  | Language: |
| 2   | 15     | 2021/22 | Summer    | Elective | English   |
| <b>Lecturer:</b> Aleksandra Koszarek-Cyra<br><b>Email:</b> aleksandra.koszarek-cyra@ug.edu.pl   |        |         |           |          |           |
| <b>Course description:</b><br>The main aim of the lecture is to familiarize students with chosen issues in the field of low-emission economy - the pillar of sustainable development. Particular emphasis will be placed on presenting the process of transformation of the economy in pursuit of climate neutrality. Topics such as investments in renewable energy sources and prosumer energy, zero and plus energy construction, green building standards and certification systems, smart-metering as well as investments of local government units in the field of emission reduction will be discussed.<br>Course contents: 1. Transformation of the economy towards climate neutrality - assumptions, processes, forms of support 2. Investments in renewable energy sources - types of sources, investment opportunities, environmental benefits 3. Prosumer energy - definition, essence, social dimension, examples 4. Zero- and plus-energy construction - definition, standards, and certification systems for green construction, examples 5. Smart-metering - definition, application possibilities, benefits of application 6. Investments of local government units in the field of emission reduction - examples, financing possibilities, social benefits  |        |         |           |          |           |
| <b>Reading list:</b><br>OECD. Green Growth Studies Energy; OECD Publishing: Paris, France, 2012<br>Thomson G. Energy Efficiency and Sustainable Development. CALLISTO REFERENCE 2017<br>World Green Building Council The business case for green building A Review of the Costs and Benefits for Developers, Investors and Occupants, 2013 <a href="http://www.worldgbc.org/">http://www.worldgbc.org/</a><br>Rennings K. (2000) Redefining innovation — eco-innovation research and the contribution from ecological economics Ecological Economics, 32 (2000), pp. 319-332<br>Hellström, T. Dimensions of environmentally sustainable innovation: the structure of eco- innovation concepts, w: Sustainable Development, v. 15, n. 3 (2007), s. 148-159<br>Jednak, S.; Kragulj, D. Economic Aspects of Energy Efficiency and Sustainability, Relevance of Energy Efficiency in the Context of Sustainable Development; FON: Belgrade, Serbia, 2020; pp. 7–29<br>Kućeba R., Zawada M., Szajt M. Kowalik J. Prosumer Energy as a Stimulator of Micro- Smart Grids Development - on the Consumer Side. IOP Conference Series: Earth and Environmental Science, Volume 164, 2018 2nd International Conference on Energy and Environmental Science 16–18 January 2018, Kuala Lumpur, Malaysia<br>United Nations Industrial Development Organizations 2015 Industrial Prosumers of Renewable Energy. Contribution to Inclusive and Sustainable Industrial Development (Vienna) <a href="https://www.unido.org/fileadmin/media/documents/pdf/Energy_Environment/PROSUME">https://www.unido.org/fileadmin/media/documents/pdf/Energy_Environment/PROSUME</a><br>Hart, S.L. Beyond Greening: Strategies for a Sustainable World. W: Harvard Business Review 75, no. 1 (1997) |        |         |           |          |           |
| <b>Grading:</b><br>The final grades are based on the score according the University terms of study:<br>50% or less - 2,0 (fail)<br>>50% - 3,0 (pass)<br>>60% - 3,5 (pass +)<br>>70% - 4,0 (good)<br>>80% - 4,5 (good+)<br>>90% - 5,0 (very good)  |        |         |           |          |           |
| <b>Prerequisites:</b><br>There are no pre-requisites for this course  |        |         |           |          |           |