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| Title<br><b>Auditing and energy management</b>   | Code<br><b>1010102221010130563</b> |
| Field<br><b>Environmental Engineering Second-cycle Studies</b>                                   | Year / Semester<br><b>1 / 2</b>    |
| Specialty<br><b>Heating, Air Conditioning and Air Protection</b>                                 | Course<br><b>core</b>              |
| Hours<br>Lectures: <b>2</b> Classes: <b>1</b> Laboratory: <b>-</b> Projects / seminars: <b>-</b> | Number of credits<br><b>3</b>      |
| Language<br><b>polish</b>  |                                    |

**Lecturer:**

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**Faculty:**

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**Status of the course in the study program:**

Core course for students of Environmental Engineering

**Assumptions and objectives of the course:**

The main aim of the course is to revile the knowledge on energy, exergy and economy efficiency analysis of community energy systems and to present and discuss methods of building energy rating methods and energy audit procedures.

**Contents of the course (course description):**

Overview of methods of energy, exergy and economy analysis in energy management. Application of energy, exergy and economy balances in efficiency analysis of building technical systems, co-generated production of heat, electricity and cooling energy systems. Formal aspects of energy audit procedures Overview of energy rating methods for buildings; Overview of energy planning methods with respect to community heating system modernization and development.

**Introductory courses and the required pre-knowledge:**

Basic knowledge of thermodynamics (energy, exergy and substantial balances) as well as of elementary economics (costs, profits, economy efficiency measures);

**Courses form and teaching methods:**

Lectures (transparent and multimedia projector);  
Tutorials ? blackboard case study calculations.

**Form and terms of complete the course - requirements and assessment methods:**

Written examination,  
Written colloquium.

**Basic Bibliography:**

**Additional Bibliography:**