



Subject card

| | | | | | | | |
|---|---|--|---|-------------------------------------|--|------------|-----|
| Subject name and code | Heat Turbomachinery, PG_00042103 | | | | | | |
| Field of study | Power Engineering | | | | | | |
| Date of commencement of studies | October 2024 | | Academic year of realisation of subject | | 2026/2027 | | |
| Education level | first-cycle studies | | Subject group | | Obligatory subject group in the field of study Subject group related to scientific research in the field of study | | |
| Mode of study | Full-time studies | | Mode of delivery | | at the university | | |
| Year of study | 3 | | Language of instruction | | English | | |
| Semester of study | 5 | | ECTS credits | | 4.0 | | |
| Learning profile | general academic profile | | Assessment form | | exam | | |
| Conducting unit | Department of Energy and Industrial Apparatus -> Faculty of Mechanical Engineering and Ship Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 30.0 | 0.0 | 15.0 | 0.0 | 0.0 | 45 |
| | E-learning hours included: 0.0 | | | | | | |
| Learning activity and number of study hours | Learning activity | Participation in didactic classes included in study plan | | Participation in consultation hours | | Self-study | SUM |
| | Number of study hours | 45 | | 7.0 | | 48.0 | 100 |
| Subject objectives | Basic knowledge of turbomachinery principle of operation and turbomachinery enrgy power plants. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | [K6_U07] is able to use basic knowledge of fluid flow machines and methods related to their design in an analytical and numerical approach to the preliminary design of an energy installation | | | | | | |
| | [K6_W02] has a basic knowledge of physics (including optics, electricity and magnetism), chemistry, technical thermodynamics, fluid mechanics and general mechanics needed to understand and describe the basic phenomena occurring in devices and systems, energy plants and transmission networks and their environment | | | | | | |
| | [K6_W09] knows the dangers of electrical devices and the principles of protection against them, has basic knowledge of heat exchangers, has basic knowledge of power equipment such as pumps, compressors, turbines, combustion engines, boilers, pipelines and their accessories and methods of their selection depending on the needs | | | | | | |
| Subject contents | Basics of thermodynamical cycles. Elements of turbine power plants. Fluid problems in turbomachinery. Theory of turbine stages. Turbine flow parts. | | | | | | |
| Prerequisites and co-requisites | Basics of mechanics, fluid mechanics and thermodynamics. | | | | | | |

| | | | |
|--|--------------------------|--|-------------------------------|
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | Written exam | 60.0% | 100.0% |
| Recommended reading | Basic literature | Perycz S., Turbiny parowe i gazowe, IMP Ossolineum, Kosowski K. ed., Steam and Gas Turbines, Alstom, ISBN 978-83-925959-3-9, 2007 | |
| | Supplementary literature | - | |
| | eResources addresses | Adresy na platformie eNauczanie: | |
| Example issues/ example questions/ tasks being completed | | | |
| Work placement | Not applicable | | |