



Subject card

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|---|--|--|---|-------------------------------------|------------------------|------------|-----|
| Subject name and code | Work placement, PG_00055948 | | | | | | |
| Field of study | Power Engineering, Power Engineering, Power Engineering | | | | | | |
| Date of commencement of studies | October 2021 | | Academic year of realisation of subject | | 2024/2025 | | |
| Education level | first-cycle studies | | Subject group | | Optional subject group | | |
| Mode of study | Full-time studies | | Mode of delivery | | at the university | | |
| Year of study | 4 | | Language of instruction | | Polish | | |
| Semester of study | 7 | | ECTS credits | | 6.0 | | |
| Learning profile | general academic profile | | Assessment form | | assessment | | |
| Conducting unit | Zakład Maszyn Przepływowych -> Institute of Energy -> Faculty of Mechanical Engineering and Ship Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr inż. Marzena Banaszek | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 |
| | 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 | 0 | | 4.0 | | 146.0 | 150 |
| Subject objectives | Diploma internships give the opportunity to expand the acquired knowledge with practical skills to apply it in industrial conditions and allow students to test the acquired theoretical knowledge in practical situations. They allow you to learn the rules of operation of various enterprises, the specifics of work in various positions, the requirements of future employers and adapt your knowledge and skills to the technical problems of a given enterprise. Internships develop skills necessary in future professional work. | | | | | | |

| Learning outcomes | Course outcome | Subject outcome | Method of verification |
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| | [K6_U12] can correctly choose tools (analytical or numerical) to solve engineering problems filtration processes, and data analysis; is able to use photogrammetric and remote sensing tools in engineering tasks in the field of geodetic techniques and metrology | The student is able to choose tools (measurement, analytical or numerical) to solve engineering problems, acquire, filter, process and analyze data; is able to use photogrammetric and remote sensing tools in engineering tasks in the field of geodetic techniques and metrology. | [SU4] Assessment of ability to use methods and tools |
| | [K6_K01] is aware of the need for training and self-improvement in the profession of energy and the possibility of further education; can think and act in a creative and entrepreneurial manner; can define priorities for the implementation of an individual or group task | The student is aware of the need for training and self-improvement in the field of power engineering and the possibility of further education; is able to think and act in a creative and entrepreneurial way; is able to set priorities for the implementation of an individual or group task. | [SK5] Assessment of ability to solve problems that arise in practice |
| | [K6_U05] is able to formulate and carry out energy balances in devices and energy systems, also perform an energy audit of a simple building object, is able to perform a preliminary profitability analysis of a planned energy investment | The student is able to formulate and carry out energy balances in devices and energy systems, also perform an energy audit of a simple building, is able to perform a preliminary analysis of the profitability of the planned energy investment. | [SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information |
| | [K6_U04] is able to design a simple device structure and prepare the accompanying technical documentation, conduct a basic technical and economic analysis of energy systems, including technologies using renewable and pro-ecological energy sources as well as conventional and nuclear energy, design energy installations for them and their basic elements (including electric lighting)); select, operate and control the most commonly used electrical devices and drive systems. | The student is able to design the construction of a simple device and prepare the accompanying technical documentation, conduct a basic technical and economic analysis of energy systems, including technologies using renewable and environmentally friendly energy sources as well as conventional and nuclear energy, design energy installations and their basic elements (including lighting) for them electrical); select, operate and control the most commonly used electrical devices and drive systems. | [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools |
| | [K6_U14] can use properly selected methods and devices for hydraulics and hydrology, enabling determination of basic parameters characterizing the flow of medium in channels, pipelines and flow objects and can design installations, networks in the field of sanitary engineering | The student is able to use properly selected methods and devices of hydraulics and hydrology, enabling the determination of basic quantities characterizing the fluid flow in channels, transmission pipelines and flow objects, and is able to design networks and installations in the field of sanitary engineering. | [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject |

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| Subject contents | Diploma internships must include design, workshop and operational work in the field of energy. I. General technical issues 1. Getting acquainted with the structure of the company, organization of work and its profile of activity (scope of production and/or services) and (possibly) the law regulating its functioning. 2. Getting to know the technical processes implemented in the company, including: getting to know the issues of automation, process control with the use of modern computer technologies important in the process of supporting production processes, as well as the analysis of measurement results. 3. Getting to know the technological installations in the company, including the problems of control, reliability, diagnostics and environmental protection. II. Maintenance and workshop works (only under the supervision of authorized persons) 1. Auxiliary work in the operation, inspection, repair, installation and start-up of power equipment. 2. Auxiliary works during periodic inspections and operational measurements of selected installations. 3. Auxiliary works in the maintenance, repair or replacement of power equipment in the following installations: electronic, heating, pneumatic, hydraulic, etc. III. Design and construction works 1. Reading and understanding the available technical documentation and manuals for subassemblies and devices and/or energy systems. 2. Getting acquainted with the computer systems used in the company, the hardware and software used and their functions. 3. Participation in the design of energy equipment and/or systems, such as: turbines (thermal, hydro and wind), power plants (conventional and unconventional), heat exchangers, boilers, diagnostic systems, control and automation systems. | | |
| Prerequisites and co-requisites | 1. Preliminary Activities - present company, the objectives and program practices, training, occupational safety and protection of personal collection. 2. Work in the choosen company department. 3. Completion of the practice - the implementation of the report from the practice, the execution of formalities related to the completion and validation practice. | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | Internship report | 100.0% | 100.0% |
| Recommended reading | Basic literature | https://wimio.pg.edu.pl/studenci/praktyki-i-staze https://wimio.pg.edu.pl/studenci/praktyki-i-staze/energetyka | |
| | Supplementary literature | https://pg.edu.pl/biuro-karier | |
| | eResources addresses | Adresy na platformie eNauczanie: | |
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| Example issues/ example questions/ tasks being completed | 1. Describe the basic structures and organization of work in a company. 2. Discuss exemplary work on the operation, control, repair, installation and start-up of power equipment. 3. Discuss the principles of safe work in the company. 4. Describe the procedures for performing work on the repair and commissioning of power equipment. 5. Explain the principles of making technical documentation and instructions for power equipment. | | |
| Work placement | Not applicable | | |