



Subject card

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|---|---|--|---|-------------------------------------|--|--|-----|
| Subject name and code | Hydraulic Drives Design, PG_00057237 | | | | | | |
| Field of study | Ocean Engineering | | | | | | |
| Date of commencement of studies | February 2023 | Academic year of realisation of subject | | | 2023/2024 | | |
| Education level | second-cycle studies | Subject group | | | Optional subject group 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 | 1 | Language of instruction | | | Polish | | |
| Semester of study | 2 | ECTS credits | | | 3.0 | | |
| Learning profile | general academic profile | Assessment form | | | assessment | | |
| Conducting unit | Faculty of Ocean Engineering and Ship Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr inż. Daniel Piątek | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 0.0 | 0.0 | 30.0 | 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 | | 10.0 | | 20.0 | 75 |
| Subject objectives | <p>understanding of the functioning of the hydrostatic drive systems;</p> <p>know the specifics of hydrostatic systems in ocean engineering;</p> <p>knowledge of the workings of hydraulic components;</p> <p>ability to design hydraulic systems structures;</p> <p>the ability to calculate and matching system components;</p> | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | | Method of verification | |
| | [K7_U07] in compliance with a formulated specification and with the aid of appropriate tools and methods, is able to complete an advanced engineering task within the range of design, construction and operation of ocean technology objects and systems | | student is able to optimize the operation of the hydrostatic system in terms of the selected criterion: energy efficiency, construction and operation costs, etc. | | | [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information | |
| | [K7_W06] has an organized, widened knowledge on engineering methods and design tools allowing the conducting of advanced projects within the construction and operation of ocean technology objects and systems | | student using computer tools can design a complete hydraulic system for an ocean engineering object | | | [SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge | |
| | [K7_W05] has an organized, widened knowledge on design, construction and operation of ocean technology objects and systems | | student is able to design a hydrostatic drive system and select its components | | | [SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge | |
| Subject contents | Calculation of the components of the hydraulic system installation, pumps, motors, valves; selection of items from the directory, execute technical drawings; | | | | | | |
| Prerequisites and co-requisites | | | | | | | |
| Assessment methods and criteria | Subject passing criteria | | Passing threshold | | | Percentage of the final grade | |
| | project | | 60.0% | | | 100.0% | |

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| Recommended reading | Basic literature | <p>1. STRYCZEK, S.: Napęd hydrostatyczny. T I i II. WNT, Warszawa 2005.</p> <p>2. PASZOTA, Z.: Aspects Energetiques des Transmissions Hydrostatiques. Wyd PG, Gdańsk 2002</p> <p>3. GÓRSKI, Z.: Budowa i działanie okrętowych urządzeń hydraulicznych. TRADEMAR, Gdynia 2008.</p> <p>4. DYMARSKI, Cz.: Okrętowe śruby nastawne. Wyd. PG, Gdańsk 2009.</p> <p>5. BALCERSKI, A., BOCHĘŃSKI, D.: Układy technologiczne i energetyczne jednostek oceanotechnicznych. Wydawnictwo PG, Gdańsk 1998.</p> |
| | Supplementary literature | - |
| | eResources addresses | |
| Example issues/ example questions/ tasks being completed | | |
| Work placement | Not applicable | |