GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

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|---|---|---|---|
| Subject name and code | , PG_00058885 | | |
| 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 | |
| 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 | 2.0 |
| Learning profile | general academic profile | Assessment form | assessment |
| Conducting unit | Department of Ship Manufacturing Technology, Quality Systems and Materials Science -> Faculty of Mechanical Engineering and Ship Technology | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Maciej Reichel | |
| | Teachers | dr inż. Maciej Reichel | |

**Lesson types and methods of instruction**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 0.0 | 0.0 | 0.0 | 30.0 | 0.0 | 30 |

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 | 30 | 0.0 | 0.0 | 30 |

**Subject objectives**

Conducting the analysis of the dynamic positioning ability of the selected vessel.

**Learning outcomes**

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [K7_W05] has an organized, widened knowledge on design, construction and operation of ocean technology objects and systems | Student recognises the requirements for dynamic positioning system design. | [SW3] Assessment of knowledge contained in written work and projects |
| [K7_U06] when forming and solving design tasks can see their non-technical aspects, including environmental, economical and legal ones. Applies HSE rules and regulations | Student takes all necesary aspects into consideration during DP analyses. | [SU2] Assessment of ability to analyse information |
| [K7_W07] has knowledge on the development perspectives of ocean technology objects and systems, knows the newest and most relevant achievements in ocean technology | Student can evaluate present and future rules and regulations, which influence the DP issues. | [SW3] Assessment of knowledge contained in written work and projects |

**Subject contents**

Preparation of DP analysis. Analysis of the influence of the environment on the behavior of the ship. Analysis of the operation of thrusters in the DP issue with their limitations.

**Prerequisites and co-requisites**

Ship hydrodynamics.

Seakeeping abilities

Ship Motion Mechanics II

**Assessment methods and criteria**

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| | 100.0% | 100.0% |

| | | |
|---|---|---|
| Recommended reading | Basic literature | The International Marine Contractors Association, Specification for DP capability plots, IMCA M 140 Rev. 1, June 2000.<br><br>Faltinsen, O. M., Sea Loads on Ships and Offshore Structures, Cambridge University Press 1990.<br><br>Reichel, M. Hydromechaniczne aspekty projektowania statków z napędem azymutalnym, Wydawnictwo PG, 2019<br><br>Blendermann W. Wind loads on moored and manoeuvring vessels. Proceedings 12th InternationalConference on O!shore Mechanics and Arctic Engineering (OMAE), New York: ASME, 1993, v1, p. 183. |
| | Supplementary literature | Brix, J. (editor), Manoeuvring Technical Manual, Seehafen Verlag, 1993 |
| | eResources addresses | |
| Example issues/ example questions/ tasks being completed | | |
| Work placement | Not applicable | |