GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

| | | | |
|---|---|---|---|
| Subject name and code | Motion Mechanics of Yachts 2, PG_00045108 | | |
| Field of study | Ocean Engineering, Ocean Engineering | | |
| Date of commencement of studies | October 2020 | Academic year of realisation of subject | 2022/2023 |
| Education level | first-cycle studies | Subject group | |
| Mode of study | Full-time studies | Mode of delivery | at the university |
| Year of study | 3 | Language of instruction | Polish |
| Semester of study | 6 | ECTS credits | 2.0 |
| Learning profile | general academic profile | Assessment form | assessment |
| Conducting unit | Department of Hydromechanics and Hydroacoustics -> Faculty of Mechanical Engineering and Ship Technology | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Michał Krężelewski | |
| | Teachers | dr inż. Michał Krężelewski<br>mgr inż. Hanna Pruszko | |

**Lesson types and methods of instruction**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 15.0 | 0.0 | 0.0 | 15.0 | 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 | 4.0 | 16.0 | 50 |

**Subject objectives**

The student recognizes the maneuvering features of modern ships. Uses the equations of ship maneuvering motion. Distinguishes between types of steering devices. Draws a technical drawing of a propeller. Calculates and designs the rudder.

**Learning outcomes**

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [K6_W05] has an organized knowledge on design, construction and operation of ocean technology objects and systems | | [SW3] Assessment of knowledge contained in written work and projects |
| [K6_U05] can formulate a simple engineering task and its specification within the range of design, construction and operation of ocean technology objects and systems | | [SU1] Assessment of task fulfilment<br>[SU4] Assessment of ability to use methods and tools |
| [K6_W06] has an organized knowledge on engineering methods and design tools allowing the conducting of projects within the construction and operation of ocean technology objects and systems | | [SW1] Assessment of factual knowledge |
| [K6_K03] understands non-technical aspects and effects of operation as an engineer, its influence on the environment and is aware of the responsibilities for the decisions taken | | [SK3] Assessment of ability to organize work |

**Subject contents**

The maneuvering abilities of the ship. Maneuvering model tests. Equations of motion of a maneuvering ship. Ship steering devices. Selection and calculations of ship rudders. Sea wave description. Seakeeping predictions.

**Prerequisites and co-requisites**

Ship Motion Mechanics I

| | | | |
|---|---|---|---|
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | | 100.0% | 50.0% |
| | | 80.0% | 50.0% |
| Recommended reading | Basic literature | Marchaj Cz. Teoria żeglowania - hydrodynamika kadłuba, 2010, wydawnictwo: Alma-Press<br><br>Wełnicki Wiesław MECHANIKA RUCHU OKRĘTU SKRYPT PG, GDAŃSK 1989<br><br>Wełnicki Wiesław STEROWNOŚĆ OKRĘTU PWN WARSZAWA 1966 | |
| | Supplementary literature | Krężelewski Mieczysław HYDROMECHANIKA OGÓLNA I OKRĘTOWA CZ.II SKRYPT PG GDAŃSK 1982 | |
| | eResources addresses | Adresy na platformie eNauczanie: | |
| Example issues/ example questions/ tasks being completed | | | |
| Work placement | Not applicable | | |