



Subject card

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|---|--|--|-------------------------------------|------------|--|---------|-----|
| Subject name and code | Maneuverability and Seakeeping, PG_00060544 | | | | | | |
| Field of study | Naval Architecture and Offshore Structures | | | | | | |
| Date of commencement of studies | October 2024 | Academic year of realisation of subject | | | 2026/2027 | | |
| Education level | first-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 | 3 | Language of instruction | | | Polish | | |
| Semester of study | 5 | ECTS credits | | | 5.0 | | |
| Learning profile | general academic profile | Assessment form | | | assessment | | |
| Conducting unit | Institute of Ocean Engineering and Ship Technology -> Faculty of Mechanical Engineering and Ship Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr inż. Maciej Reichel | | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 45.0 | 0.0 | 15.0 | 0.0 | 0.0 | 60 |
| | 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 | 60 | 6.0 | | 59.0 | 125 | |
| Subject objectives | The aim of the subject is to introduce to students the theory of seakeeping and manoeuvring abilities of ships. | | | | | | |
| Learning outcomes | Course outcome | Subject outcome | | | Method of verification | | |
| | [K6_W02] has knowledge in the field of technical mechanics, fluid mechanics, strength of materials, necessary to understand the basic physical phenomena occurring in ocean engineering | student has knowledge on issues making ship seakeeping and manoeuvring abilities worse | | | [SW1] Assessment of factual knowledge | | |
| | [K6_U06] in compliance with a formulated specification and with the aid of appropriate tools and methods, is able to complete a simple engineering task within the range of design, construction and operation of ocean technology objects and systems | student is able to predict seakeeping and manoeuvring abilities of ships | | | [SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools | | |
| | [K6_W03] has knowledge of hydromechanics, thermodynamics, machine design, ecology, materials science necessary to understand the principles of construction and operation of ocean engineering facilities and equipment | student understands the influence of ship hull shape and design of propulsion-steering system on seakeeping and manoeuvring abilities of ships | | | [SW3] Assessment of knowledge contained in written work and projects | | |

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| Subject contents | <p>Wave theory</p> <p>Ship behaviour on waves - additional resistance</p> <p>Dangerous motions of ships</p> <p>Basic information on manoeuvring characteristics of ships</p> <p>Influence of ship hull and design of propulsion-steering devices on seakeeping and manoeuvring abilities</p> | | |
| Prerequisites and co-requisites | initial course on hydrodynamics, propulsion and resistance | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | exam | 60.0% | 50.0% |
| | lab test | 60.0% | 50.0% |
| Recommended reading | Basic literature | <p>Krężelewski - Hydromechanika okrętu</p> <p>Brix - Manoeuvring Technical Manual</p> <p>Dudziak - Teoria Okrętu</p> | |
| | Supplementary literature | Reichel - Hydromechaniczne aspekty projektowania statków z napędem azymutalnym | |
| | eResources addresses | Adresy na platformie eNauczanie: | |
| Example issues/ example questions/ tasks being completed | <p>Wave theory</p> <p>Added resistance</p> <p>Ship motions on waves</p> <p>IMO manoeuvring model tests</p> | | |
| Work placement | Not applicable | | |