



Subject card

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| Subject name and code | , PG_00056272 | | | | | | |
| Field of study | Design and Construction of Yachts | | | | | | |
| Date of commencement of studies | October 2021 | Academic year of realisation of subject | | | 2023/2024 | | |
| Education level | first-cycle studies | Subject group | | | Optional subject group Subject group related to practical vocational preparation | | |
| 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 | practical profile | Assessment form | | | assessment | | |
| Conducting unit | Faculty of Ocean Engineering and Ship Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr inż. Mohammad Ghaemi | | | | |
| | Teachers | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 0.0 | 15.0 | 0.0 | 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 | | 3.0 | | 17.0 | 50 |
| Subject objectives | The aim of the course is learning the knowledge and skills regarding the principles of operation of basic yacht automation and control systems as well as the basics of digitization of their subsystems. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | K6_U05 | | The student is able to formulate a simple engineering task and its specificity in the field of conceptual design and operation of power yacht control systems. | | [SU3] Assessment of ability to use knowledge gained from the subject | | |
| | K6_W04 | | The student has basic knowledge in the field of automation and control of onboard subsystems useful for understanding the possibilities of their application in the design and construction of motor yachts | | [SW1] Assessment of factual knowledge | | |
| | K6_W06 | | The student has a structured knowledge of engineering methods and equipment enabling the implementation of conceptual designs in the field of major power yacht control systems, including the course and trajectory control system, the propulsion control system, and the roll stabilization system. | | [SW1] Assessment of factual knowledge | | |
| | K6_W03 | | The student has a basic knowledge of the digitalization of basic systems and subsystems of motor yachts. | | [SW1] Assessment of factual knowledge | | |
| Subject contents | <ol style="list-style-type: none"> 1. Introduction and principle definitions 2. Model of yacht motion, incl. model of disturbances 3. Yacht motion stability 4. Yacht course and trajectory control 5. Yacht roll control 8. Yacht speed control 9. Digitalization of motor yachts subsystems | | | | | | |

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| Prerequisites and co-requisites | Preceding subjects: - Fundamentals of automatics. | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | Lab. tests and assignments: 50 points | 56.0% | 48.0% |
| | Presence and activity: 5 points | 0.0% | 4.0% |
| | 1 colloquium: 50 points | 56.0% | 48.0% |
| Recommended reading | Basic literature | Basic literature 1. 2. Fossen T. I., Handbook of Marine Craft Hydrodynamics and Motion Control, John Wiley & Sons, 2011. 2. Thor I. Fosen: Marine Control Systems, Marine Cybernetics AS, 2002. | |
| | Supplementary literature | 1. Thor I. Fossen: Guidance and Control of Ocean Vehicles. John Wiley and Sons, 1994. | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | . | | |
| Work placement | Not applicable | | |