



Subject card

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| Subject name and code | Fundamentals of Machinery and Equipment Technical Operation , PG_00044604 | | | | | | |
| Field of study | Transport | | | | | | |
| Date of commencement of studies | October 2022 | | Academic year of realisation of subject | | 2023/2024 | | |
| Education level | first-cycle studies | | Subject group | | Obligatory subject group in the field of study 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 | 2 | | Language of instruction | | Polish | | |
| Semester of study | 4 | | ECTS credits | | 3.0 | | |
| Learning profile | general academic profile | | Assessment form | | assessment | | |
| Conducting unit | Department of Machine Design and Vehicles -> Faculty of Mechanical Engineering and Ship Technology | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr hab. inż. Piotr Mioduszewski | | | | |
| | Teachers | | dr hab. inż. Piotr Mioduszewski | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 15.0 | 0.0 | 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 | | 5.0 | | 40.0 | 75 |
| Subject objectives | To provide basic knowledge about the operation of machines on the example of motor vehicles. | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | Method of verification | | |
| | [K6_K01] able to think and act creatively and enterprisingly; able to define priorities to support the delivery of an individual or group task; understands the need for continuous education and taking responsibility as a professional for their work and the work of the team | | Student describes operation of main motor vehicle systems and units | | [SK1] Assessment of group work skills | | |
| | [K6_W13] has basic knowledge of the construction, operation and diagnostics of means of transport and the relevant methods, tools and materials | | The student has knowledge on selected issues concerning the operation of motor vehicles | | [SW1] Assessment of factual knowledge | | |
| | [K6_U11] able to describe and assess critically the design of basic means of transport and systems of transport, able to select methods for organising their technical operation | | Student is able to describe automotive facilities used in the process of vehicle operation | | [SU5] Assessment of ability to present the results of task | | |
| Subject contents | Machine and device operation: basic definitions. Basics of maintenance theory. Utilisation of machines and devices. Utilisation of motor vehicles. Utilisation processes - clasification. Vehicle operation systems. Transport process. Technic-economic indicators. Choise of optimal transport. Basic wear processes in maintenance. Accelerating wear factors and prevention. Influence od utilisation and service conditions. Service and repair systems. Clasification of services. Maintenance materials. Fuels, oils, greases. Conservation materials. Maintenance fluids. Vehicle tyres. Technical back-up facilities. Organisation of technical back-up facilities of motorisation. | | | | | | |
| Prerequisites and co-requisites | Knowledge of mechanics of machines and devices. Basic knowledge of machine building and mechanical engineering. Knowledge of building and principles of operation of systems and units in motor vehicles. | | | | | | |
| Assessment methods and criteria | Subject passing criteria | | Passing threshold | | Percentage of the final grade | | |
| | Presentation | | 100.0% | | 30.0% | | |
| | Test | | 50.0% | | 70.0% | | |

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| Recommended reading | Basic literature | K. Abramek, M. Uzdowski: Pojazdy samochodowe. Podstawy obsługi i napraw, WKiŁ, Warszawa M. Uzdowski, K. Abramek, K. Garczyński: Pojazdy samochodowe. Eksploatacja techniczna i naprawa, WKiŁ, Warszawa S. Orzełowski: Naprawa i obsługa pojazdów samochodowych. WSiP, Warszawa A. Maryański: Stacje obsługi samochodów, WKiŁ, Warszawa J. Michałowska: Paliwa, oleje i smary, WKiŁ Warszawa |
| | Supplementary literature | M. Hebda, T. Mazur: Podstawy eksploatacji pojazdów samochodowych, WKiŁ, Warszawa J. Cypko, E. Cypko: Podstawy technologii i organizacji naprawy pojazdów mechanicznych, WKiŁ, Warszawa J. Janecki, S. Gołąbek, Zużycie części i zespołów pojazdów samochodowych, WKiŁ, Warszawa. |
| | eResources addresses | Adresy na platformie eNauczanie: Podstawy eksploatacji technicznej maszyn i urządzeń, Transport (WILiŚ), I st., sem.04 - 2024 - Moodle ID: 38673 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=38673 |
| Example issues/ example questions/ tasks being completed | | |
| Work placement | Not applicable | |

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