



Subject card

| | | | | | | | |
|---|--|--|-------------------------|-------------------------------------|---|------------|-----|
| Subject name and code | Work Safety and Ergonomics, PG_00040064 | | | | | | |
| Field of study | Mechanical Engineering | | | | | | |
| Date of commencement of studies | October 2021 | Academic year of realisation of subject | | | 2023/2024 | | |
| Education level | first-cycle studies | Subject group | | | Humanistic-social subject group Subject group related to scientific research in the field of study | | |
| Mode of study | Part-time studies | Mode of delivery | | | at the university | | |
| Year of study | 3 | Language of instruction | | | Polish | | |
| Semester of study | 5 | ECTS credits | | | 1.0 | | |
| 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 inż. Sławomir Sommer | | | | |
| | Teachers | | dr inż. Sławomir Sommer | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 8 |
| | 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 | 8 | | 1.0 | | 16.0 | 25 |
| Subject objectives | Gaining basic knowledge of ergonomics and occupational health and safety. | | | | | | |

| | | | |
|--|---|--|---|
| Learning outcomes | Course outcome | Subject outcome | Method of verification |
| | [K6_K02] understands ex-technical aspects of the activities included in the profession of a mechanical engineer, among others its social impact and influence on the condition of an environment; is aware of the responsibility connected with the decisions made in connection with engineering activity | The student explains the concept of ergonomics. It describes its goals and area of application. It defines the human - machine - environment system. Designs the human work environment taking into account the principles of design. Uses different human models. It presents the safety and reliability of the man - machine - environment system. It shows the informativeness of machines. | [SK2] Assessment of progress of work |
| | [K6_U11] is able to analyse the operation of devices and compare the construction solutions applying usage, safety, environmental, economic and legal criteria | The student explains the concept of ergonomics. It describes its goals and area of application. It defines the human - machine - environment system. Designs the human work environment taking into account the principles of design. Uses different human models. It presents the safety and reliability of the man - machine - environment system. It shows the informativeness of machines. | [SU1] Assessment of task fulfilment |
| | [K6_W12] possesses basic knowledge necessary to understand the ex-technical conditions of engineering activity, possesses basic knowledge on management, including quality management and running commercial enterprise, within the range of protection of intellectual property and patent law; knows general principles of creating and developing forms of individual entrepreneurship and basic HSE rules applicable to machine industry | The student explains the concept of ergonomics. It describes its goals and area of application. It defines the human - machine - environment system. Designs the human work environment taking into account the principles of design. Uses different human models. It presents the safety and reliability of the man - machine - environment system. It shows the informativeness of machines. | [SW2] Assessment of knowledge contained in presentation |
| Subject contents | Definitions of ergonomics, their purposes and application area. Description of man - machine - environment configuration. Conception of balanced development. Environmental management system. Model of man and its characteristics. Man capabilities versus industrial processes. Environment of working man - circle conditions. Design principles of environment of working man. Safety and reliable man - machine - environment configuration. Information acquisition of machines. | | |
| Prerequisites and co-requisites | Knowledge of Physics (High School level). | | |
| Assessment methods and criteria | Subject passing criteria | Passing threshold | Percentage of the final grade |
| | End test | 50.0% | 100.0% |
| Recommended reading | Basic literature | 1. Koradecka D.: "Bezpieczeństwo pracy i ergonomia", tom I i II. CIOP, Warszawa, 1997. 2. Hempel L.: "Człowiek i maszyna - techniczny model współdziałania", materiały własne, 1984. 3. Wykowska M.: "Ergonomia", Wyd Akademii Górniczo-Hutniczej w Krakowie, Kraków, 1994. | |
| | Supplementary literature | No requirements | |
| | eResources addresses | | |
| Example issues/ example questions/ tasks being completed | 1) definitions of ergonomics 2) human models | | |
| Work placement | Not applicable | | |