

## Subject card

| Subject name and code                       | Fundamentals of Machine Design II, PG_00055397  |  |   |                                     |             |   |                               |     |  |
|---|---|--|---|-------------------------------------|-------------|---|-------------------------------|-----|--|
| Field of study                              | Mechanical Engineering  |  |   |                                     |             |   |                               |     |  |
| Date of commencement of studies             | October 2022  |  | Academic year of realisation of subject   |                                     |             | 2024/2025   |                               |     |  |
| 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                               | 3   |  | Language of instruction   |                                     |             | Polish  |                               |     |  |
| Semester of study                           | 5   |  | ECTS credits  |                                     |             | 2.0   |                               |     |  |
| Learning profile                            | general academic profile  |  | Assessment form   |                                     |             | assessment  |                               |     |  |
| Conducting unit                             | Institute of Mechanics  | Institute of Mechanics and Machine Design -> Faculty of Mechanical Engineering and Ship Techno   |   |                                     |             | hnology   |                               |     |  |
| Name and surname                            | Subject supervisor  | prof. dr hab. inż. Michał Wasilczuk  |   |                                     |             |   |                               |     |  |
| of lecturer (lecturers)                     | Teachers  |  |   |                                     |             |   |                               |     |  |
| Lesson types and methods                    | Lesson type   | Lecture  | Tutorial  | Laboratory                          | Project Sem |   | Seminar                       | SUM |  |
| of instruction                              | Number of study hours   | 0.0  | 0.0   | 0.0                                 | 30.0        |   | 0.0                           | 30  |  |
|   | E-learning hours included: 0.0  |  |   |                                     |             |   |                               |     |  |
| Learning activity and number of study hours | Learning activity   | Participation in<br>classes include<br>plan  |   | Participation in consultation hours |             | Self-study  |                               | SUM |  |
|   | Number of study hours   | 30   |   | 2.0                                 |             | 18.0  |                               | 50  |  |
| Subject objectives                          | Presenting the knowledge and acquiring the skills of calculation methods used in machine design as well as practical designing of a simple mechanical device  |  |   |                                     |             |   |                               |     |  |
| Learning outcomes                           | Course outcome  |  | Subject outcome   |                                     |             | Method of verification  |                               |     |  |
|   | [K6_U11] is able to analyse the operation of devices and compare the construction solutions applying usage, safety, environmental, economic and legal criteria  |  |   |                                     |             | [SU1] Assessment of task fulfilment   |                               |     |  |
|   | [K6_U03] is able to identify, formulate and develop the documentation of a simple design or technological task, including the description of the results of this task in Polish or in a foreign language and to present the results using computer software or other aiding tools |  | the completed project is in the form of documentation   |                                     |             | [SU1] Assessment of task fulfilment   |                               |     |  |
|   | [K6_U07] is able to design a typical construction of a mechanical device, component or a testing station using appropriate methods and tools, adhering to the set usage criteria  |  | student carries out the project   |                                     |             | [SU1] Assessment of task fulfilment   |                               |     |  |
| Subject contents                            | making technical documentation and a project of a mechanical device   |  |   |                                     |             |   |                               |     |  |
| Prerequisites and co-requisites             | mechanics, strength of materials, engineering drawing and drafting, Machine Design I  |  |   |                                     |             |   |                               |     |  |
| Assessment methods                          | Subject passing criteria  |  | Pass  | ing threshold                       |             | Per   | Percentage of the final grade |     |  |
| and criteria                                | Project Passing shana   |  | 100.0%  |                                     |             | 100.0%  |                               |     |  |
| Recommended reading                         | Basic literature  | Prezentacje do wykładów ze strony www.pg.gda.pl/~mwasilcz Wykład<br>z Podstaw Konstrukcji Maszyn z Ćwiczeniami Rachunkowymi - skrypty<br>PG, wyd. PG |   |                                     |             |   |                               |     |  |
|   | Supplementary literature  |  | Podstawy Konstrukcji Maszyn (Fundamentals of Machine Design - series of handbooks) edited by PWN Podstawy Konstrukcji Maszyn (Fundamentals of Machine Design), WNT, editor M. Osiński |                                     |             |   |                               |     |  |

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|  | eResources addresses                   | Adresy na platformie eNauczanie: |  |  |  |
|--|--|----------------------------------|--|--|--|
| Example issues/<br>example questions/<br>tasks being completed | design problem with graphical elements |                                  |  |  |  |
| Work placement   | Not applicable                         |                                  |  |  |  |

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