COURSE DESCRIPTION CARD - SYLLABUS

Course name
Diploma seminar

Course

Field of study
Construction and Exploitation of Means of Transport

Year/Semester
2/3

Area of study (specialization)
Industrial mechatronics

Profile of study
general academic

Level of study
Second-cycle studies

Course offered in
polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
0

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
15

Number of credit points

20

Lecturers

Responsible for the course/lecturer:
DSc Eng. Krzysztof Talaśka

email: krzysztof.talaska@put.poznan.pl

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Faculty of Mechanical Engineering

ul. Piotrowo 3, 61-138 Poznań

Responsible for the course/lecturer:
PhD Eng. Dominik Wilczyński

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phone: 61 224 4512

Faculty of Mechanical Engineering

ul. Piotrowo 3, 61-138 Poznań

Prerequisites

Knowledge: General knowledge, knowledge and skills in the field of the studied specialization.

Skills: Computer and MS Office skills.

Social competences: The student understands the need to expand his competences, shows readiness to cooperate within the team.

Course objective

To acquaint students with the assumptions of the methodology of science. Preparation for self-completion of the diploma thesis.

Supplementing knowledge and skills in the field of conducting research and presenting its results.

Course-related learning outcomes

Knowledge

1. Has in-depth knowledge of the construction and principles of operation and classification of machines from a selected group.

2. Has a general knowledge of the principles and methods of constructing working machines, in particular the methods of functional and strength calculations, mathematical optimization of mechanical structures and modeling of machine structures in 3D systems.

3. Knows the main development trends in the field of machine construction

Skills

1. Can formulate and test hypotheses related to simple research problems.

2. Can plan and carry out experimental research of specific processes taking place in machines and routine research of a working machine or a vehicle from a selected group of machines.

3. Can make a medium complex design of a working machine or its assembly using modern CAD tools, including tools for spatial modeling of machines and calculations using the finite element method.

Social competences

1. Is ready to critically evaluate the knowledge and content received.

2. Is ready to recognize the importance of knowledge in solving cognitive and practical problems and to consult experts in case of difficulties in solving the problem on its own.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Grade based on the presented speeches and activities.

Programme content

The genesis of theses topics and the role of the promoter. Sources of scientific and technical information and ways of using them. Formulating hypotheses. Models and modeling. Elements of scientific language: regularities, laws, theories, rules. The structure of the thesis. Technique of writing scientific papers and editorial rules. Preparation for the diploma examination.

Teaching methods

Informative lecture with a multimedia presentation, using the case study method - analysis of sample engineering works. Students' own presentation on their progress in thesis.

Bibliography

Basic

1. Boć J., Jak pisać pracę magisterską, Wyd. Kolonia, Wrocław 2003

2. Dietrich J., System i konstrukcja, WNT, Warszawa 1978

3. Oliver P., Jak pisać prace uniwersyteckie, Wyd. Literackie, Kraków 1999

4. Orczyk J., Zarys metodyki pracy umysłowej, PWN, Warszawa 1988

5. Pieter J., Ogólna metodologia pracy naukowej, Ossolineum, Wrocław 1967

6. Szkutnik Z., Metodyka pisania pracy dyplomowej, Wyd. Poznańskie, Poznań 2005

7. Tarnowski W., Podstawy projektowania technicznego, WNT, Warszawa 1997

8. Żółtowski B., Seminarium dyplomowe; zasady pisania prac dyplomowych, Wyd. ATR, Bydgoszcz 1997

Additional

1. Literature on the subject of the diploma thesis

Breakdown of average student's workload

	Hours	ECTS
Total workload	507	20,0
Classes requiring direct contact with the teacher	50	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	457	18,0

[1] delete or add other activities as appropriate