



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Summary work-project

	Course
Field of study	Year/Semester
Mechanical and Automotive Engineering	2/2
Area of study (specialization)	Profile of study
Motor Vehicles	general academic
Level of study	Course offered in
Second-cycle studies	Polish
Form of study	Requirements
full-time	compulsory

Number of		
hours		
Lecture	Laboratory classes	Other (e.g. online)
0	0	0
Tutorials	Projects/seminars	
0	4	
Number of credit points		
5		

Lecturers	
Responsible for the course/lecturer: Ph.D. (Eng.), D.Sc. Marian Jósko, Assoc. Prof.	Responsible for the course/lecturer: Ph.D. (Eng.) Dariusz Ulbrich
email: marian.josko@put.poznan.pl	email: dariusz.ulbrich@put.poznan.pl
tel. 61 665 22 47	tel. 61 665 22 48
Faculty of Civil and Transport Engineering	Faculty of Civil and Transport Engineering
Piotrowo street 3, 60-965 Poznan	Piotrowo street 3, 60-965 Poznan

Prerequisites

Knowledge: The student has a well-established knowledge of construction and operation engineering and the methodology of designing cars and their components, legal requirements for motor vehicles, analysis, synthesis, modeling and testing of vehicle dynamics, as well as the functioning and methodology of using vehicle dynamics control system design tools.

Skills: The student is able to use the selected computer text editor and correctly uses the language in which the work is to be written. The student is able to selectively use the published scientific and research papers and knows how to use the tools to support the work at the master's level in the areas covered by the study program.



Social competences: The student is aware of the proper documentation and reliable presentation of the results of their own transitional work, complementary to the master's thesis, taking into account the copyrights of the source scientific and research works in the field of construction and operation.

Course objective

Preparing the student for independent work, synthesizing the entirety of the acquired knowledge in the field of construction or operation of motor vehicles, proper linking it with the future master's thesis and preparation of a written work on a given topic, in accordance with the applicable rules of written and graphic documentation of the results of master's thesis.

Course-related learning outcomes

Knowledge

Has general knowledge of standardization, EU recommendations and directives, national, industry and international standards systems, and industrial standards.

Has extended knowledge of modern construction materials such as carbon plastics, composites, ceramics, in terms of their construction, processing technology and applications.

He knows the main development trends in the field of mechanical engineering.

Skills

He can correctly select the optimal material and its processing technology for typical parts of working machines, taking into account the latest achievements in material engineering.

Can perform 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.

He can design the technology of exploitation of a selected machine with a high degree of complexity.

Social competences

He is ready to critically assess his knowledge and received content.

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.

It is ready to fulfill social obligations, inspire and organize activities for the benefit of the social environment.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Assessment of the written transitional work, in the form of a comprehensive and coherent study, having the attributes of a thesis, taking into account the content-related, methodological and editorial evaluation criteria.

Programme content



1. Determining the detailed topic and title of the transitional work and its substantive scope, indicating the sources of literature searches; discussion of the work schedule, questions, comments and suggestions.
2. Individual discussion with the student on the structure of the work and collected materials; approval of the plan by a consultant conducting temporary work.
3. The most important principles of creating independent, comprehensive (holistic) studies and recording these solutions in the form of a coherent transitional work with a coherent structure.
4. Including in the work such elements as: topicality of the topic, genesis, purpose, as well as conclusions and summaries, bibliographic description of literature and principles of autonomy of graphic objects, the type of tables, technical drawings, sketches and charts.
5. Correction of substantively completed transitional work and its discussion, summary and evaluation.

Teaching methods

1. Publication and discussion of the individual topic of the transitional work in its formal, substantive and methodological aspect.
2. Discussion on the substantive and methodical side and timely implementation of the transitional work within the framework of the planned consultations and a summary of the task undertaken by the consulting lecturer.

Bibliography

Basic

1. Zenderowski R.: Technika pisania prac magisterskich i licencjackich. Wyd. CeDeWu, Warszawa, 2018.
2. Szelka J.: Vademecum wykonywania opracowań naukowych. Wyd. Uniwersytetu Zielonogórskiego, Zielona Góra, 2017.
3. Wójcik K.: Piszę akademicką pracę promocyjną – licencjacką, magisterską, doktorską (9 wydanie, uzupełnione i poprawione), Wyd. Wolters Kluwer, Warszawa, 2015.
4. Pułło A.: Prace magisterskie i licencjackie. Wyd. PWN, Warszawa, 2000.

Additional

1. Dirksen J.: Projektowanie metod dydaktycznych. Efektywna strategia edukacyjna. Wyd. Helion S.A., Gliwice, 2017.
2. Stępień B.: Zasady pisania tekstów naukowych (praca doktorska i artykuły). PWN, Warszawa, wyd. I – 2015, Wyd. II – 2017.
3. Zenderowski J.: Praca magisterska. Jak pisać i obronić? - wskazówki metodologiczne. Wydawnictwo Fachowe CeDeWu, Warszawa, 2007.



4. Boć J.: Jak pisać pracę magisterską? (konsultacja filologiczna J. Miodek). Wyd. Kolonia Limited, Wrocław, 2006.
5. Węglińska M.: Jak pisać pracę magisterską. Poradnik dla studentów. Oficyna Wydawnicza „Impuls”, Kraków, 2005.
6. Kolman R.: Zdobywanie wiedzy. Poradnik podnoszenia kwalifikacji. Oficyna Wydawnicza Brandt, Bydgoszcz, 2004.
7. Opoka E.: Uwagi o pisaniu i redagowaniu prac dyplomowych na studiach technicznych. Wyd. Politechniki Śląskiej, Gliwice, 2003.
8. Literature from the substantive area covered by the subject of the summary work.

Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,0
Classes requiring direct contact with the teacher	15	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	110	4,0

¹ delete or add other activities as appropriate