



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Passing Project [N2MiBP1-PCh>PP]

### Course

Field of study

Mechanical and Automotive Engineering

Year/Semester

1/2

Area of study (specialization)

Refrigerated Vehicles

Profile of study

general academic

Level of study

second-cycle

Course offered in

polish

Form of study

part-time

Requirements

compulsory

### Number of hours

Lecture

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

4

### Number of credit points

5,00

### Coordinators

dr hab. inż. Krzysztof Bieńczak prof. PP  
krzysztof.bieniczak@put.poznan.pl

### Lecturers

### Prerequisites

**KNOWLEDGE:** The student has a basic knowledge of the place and role of transport in the economy and social life, in the system of sciences and relations with other areas of knowledge. The student knows the main tasks of systems in the area of economic functioning and development enterprises and the state.

**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 use the tools to support engineering works in the areas covered study program.

**SOCIAL COMPETENCES:** The student is aware of the proper documentation and presentation of the results your research and design work..

### Course objective

Preparation of a written work on a given topic in accordance with generally applicable rules documenting the results of research or design works..

### 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:

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Assessment of the written transitional work in terms of content, methodology and editorial content.

### Programme content

Determining the detailed topic and purpose of the work as well as its substantive scope, indicating the sources literature searches; discussion of the schedule of work implementation. Individual discussion with the student concerning the work plan and collected materials; approval of the plan by the teacher. The most important principles of writing works concerning, among others work structures, literature, descriptions of drawings and tables, editorial guidelines, etc. Individual discussion of the corrected and assessed work.

### Teaching methods

Multimedia presentations, individual projects made by students.

### Bibliography

#### Basic

1. Pułto A., Prace magisterskie i licencjackie. PWN, Warszawa 2000.
2. Wojcik K.:Piszę akademicką pracę promocyjną - licencjacką, magisterską, doktorską, Wolters Kluwer, 2015.

#### Additional

### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	5,00
Classes requiring direct contact with the teacher	4	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	71	4,00