



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma Seminar

### Course

Field of study

Year/Semester

Construction and Operation of Means of Transport

2/3

Area of study (specialization)

Profile of study

Railway 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

1

### Number of credit points

18

### Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

prof. dr hab. inż. Franciszek Tomaszewski

### Prerequisites

KNOWLEDGE: Knowledge of issues related to the subject of the master's thesis

SKILLS: Can use the scientific method in solving problems, carrying out experiments and making conclusions

SOCIAL COMPETENCES: Knows the limitations of own knowledge and skills; is able to precisely formulate questions, understands the need for further education

### Course objective

Broadening the knowledge and skills on the organization, conducting scientific and technical works and presenting the results of these works.

### Course-related learning outcomes

Knowledge

1. knows advanced methods, techniques and tools used in solving complex engineering tasks and conducting research in a selected area of transport

2. has basic knowledge of managing / running a business and individual entrepreneurship



### Skills

1. can, in accordance with the given specification, taking into account non-technical aspects? design a complex device, transport engineering system or process and complete the project? at least in part? using appropriate methods, techniques and tools, including adapting existing or developing new tools for this purpose
2. can prepare and present a scientific study in Polish and English, presenting the results of scientific research or an oral presentation on specific issues in the field of transport engineering
3. is able to interact in a team, assuming various roles in it
4. can determine the directions of further learning and implement the process of self-education, including other people

### Social competences

1. understands the importance of using the latest knowledge in the field of transport engineering in solving research and practical problems
2. understands the importance of popularizing the latest achievements in the field of transport engineering
3. is aware of the need to develop professional achievements and to observe the rules of professional ethics

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:  
credit

### Programme content

zując ogólna: rodzaje prac kwalifikacyjnych, w tym dyplomowych i zasady ich realizacji, wymagania stawiane pracom dyplomowym magisterskim. Sformułowanie problemu technicznego i tez pracy, studium literatury, część metodyczna pracy, prezentacja wyników badań, opracowanie spostrzeżeń i wniosków. Zasady redagowania pracy, wspomaganie edycyjne, opracowanie elementów graficznych, przygotowanie pracy do druku i powielenia.

Część specjalistyczna: referowanie realizowanych prac dyplomowych przez autorów

### Teaching methods

Lecture with multimedia presentation.

### Bibliography

Basic

1. Leszek W. Badania empiryczne. Wyd. ITE, Radom 1997



- Opoka E., Uwagi o pisaniu i redagowaniu prac dyplomowych na studiach technicznych, Wyd. Politechniki Śląskiej, Gliwice 2003
- Dobre obyczaje w nauce. Zbiór zasad i wytycznych (wyd. 3), Wyd. PAN Warszawa 2001
- Zaczyński W.: Poradnik autora prac seminaryjnych, dyplomowych i magisterskich. Warszawa 1995
- Urban S., Ładoński W., Jak napisać dobrą pracę magisterską, wyd. 4 uzupełn., Wyd. Akademia Ekonomiczna we Wrocławiu, Wrocław 2001
- Wiśłocki K., Metodologia i redakcja prac naukowych. Wydawnictwo Politechnik Poznańskiej, Poznań 2013.

Additional

- Wojciechowska R., Przewodnik metodyczny pisania pracy dyplomowej. Wyd. DIFIN, 2010
- Boć J., Jak pisać pracę magisterską, wyd. 4 popr., Wyd. Kolonia Wrocław, 2003

**Breakdown of average student's workload**

	Hours	ECTS
Total workload	500	18,0
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) <sup>1</sup>	450	16,0

<sup>1</sup> delete or add other activities as appropriate