



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar

### Course

Field of study

Year/Semester

Transport

2/3

Area of study (specialization)

Profile of study

Railway Transport

general academic

Level of study

Course offered in

Second-cycle studies

Polish

Form of study

Requirements

part-time

elective

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

0

0

0

Tutorials

Projects/seminars

0

9

### Number of credit points

18

### Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

prof. dr hab. inż. Franciszek Tomaszewski

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Wydział Inżynierii Lądowej i Transportu

ul. Piotrowo 3, 60-965 Poznań

### Prerequisites

**KNOWLEDGE:** The student has advanced and in-depth knowledge of transport engineering, theoretical foundations, tools and means used to solve simple engineering problems.

**SKILLS:** The student is able to plan and carry out experiments, including measurements and simulations, interpret the obtained results and draw conclusions as well as formulate and verify hypotheses related to complex engineering problems and simple research problems.

**SOCIAL COMPETENCES:** Conducting discussions, argumentation of own opinion, the need for further education.



### Course objective

The aim is to deepen the knowledge and skills on planning and conducting research works and the ability to present the results of these works.

### Course-related learning outcomes

#### Knowledge

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

Student has knowledge of ethical codes related to scientific and research work in the field of transport engineering.

#### Skills

Student is able to obtain information from literature, databases and other sources (in Polish and English), integrate them, interpret and critically evaluate them, draw conclusions and formulate and exhaustively justify opinions.

Using among others conceptually new methods, the student is able to solve complex tasks in the field of transport engineering, including typical tasks and tasks with a research component.

The student is able to 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.

The student is able to determine the directions of further learning and implement the process of self-education, including other people.

#### Social competences

Student understands the importance of using the latest knowledge in the field of transport engineering in solving research and practical problems.

Student understands the importance of popularizing activities regarding the latest achievements in the field of transport engineering.

Student is aware of the need to develop professional achievements and to comply with the rules of professional ethics.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

During the seminar, tasks related to the preparation of the thesis are carried out, i.e. the construction of the work outline and the preparation of a summary presentation. These effects are assessed, and the necessary requirement for the participation in the e-seminar is acceptance of the work by the supervisor.

### Programme content



1. Thesis concept - preparation of an outline: Requirements for the thesis; formulation of the title of the work and the main goal and research tasks. Development of a table of contents extended with a short description of the content of and individual and specific elements of the work.
2. Work editing: Working with an editing pattern; management of the bibliography and ways of citing literature. Placing graphic and tabular elements at work. The most common editing errors.
3. Key elements of the work: Preparation of an abstract, introduction, summary, and bibliography. The most common mistakes related to the formulation of key elements of the work.
4. Workshops on supporting the progress of individual master's theses: Assessment of the advancement of individual work of the seminar participants; identification of problems related to the current advances of the thesis; ways to minimize the risk of untimely work completion.
5. Job defense: Requirements for accepting the job by the supervisor; work analysis according to Anti-Plagiarism System (JSA) standards; key elements of the supervisor review and opinion. The course of defense; responding to comments and comments contained in the review.
6. Final presentation: Guidelines for preparing presentation of the key achievements; the structure and content of the presentation, behavioral elements, the most common mistakes during the presentation.
7. Summary: Review and improvement of presentations summarizing the realization of master's theses.

### Teaching methods

1. Multimedia presentations.
2. Formal documentation - quality procedures.
3. Workshop methods (preparation of materials in teams, discussion and analysis of errors and recommended solutions).

### Bibliography

#### Basic

1. Dudziak A., Żejmo A.: Redagowanie prac dyplomowych, Wskazówki metodyczne dla studentów, Wydawnictwo Difin 2008,
2. Opracowanie zbiorowe: Podręcznik pisania prac, Wydawnictwo EJB 2007,
3. Sęk A.: Podstawowe zasady pisania prac dyplomowych, Wydawnictwo Wyższej Szkoły Ekonomiczno-Społecznej, 2012.

#### Additional

1. WIT PP, Procedura przygotowania prac dyplomowych i prowadzenia egzaminów dyplomowych. PJK\_W05, <http://www.fcte.put.poznan.pl>
2. Szkutnik Z., Metodyka pisania pracy dyplomowej, Wyd. Poznańskie, Poznań 2005,



### Breakdown of average student's workload

	Hours	ECTS
Total workload	420	18,0
Classes requiring direct contact with the teacher	35	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	385	16,0

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