COURSE DESCRIPTION CARD - SYLLABUS

Course name
Passing Project [S2MiBP1-HSN>PP]

Course

Field of study
Mechanical and Automotive Engineering

Year/Semester
1/2

Area of study (specialization)
Hybrid Powertrain Systems

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
0

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
4

Number of credit points

5,00

Coordinators

prof. dr hab. inż. Ireneusz Pielecha
ireneusz.pielecha@put.poznan.pl

Lecturers

Prerequisites

KNOWLEDGE: Has knowledge of the construction, operation and testing of internal combustion engines SKILLS: Is able to independently use various sources of information, also in foreign languages. Can edit technical texts. SOCIAL COMPETENCES: Demonstrates independence in solving basic engineering tasks.

Course objective

Presentation of the purpose, scope and list of topics for transitional works. Preparing the student to write an engineering diploma thesis and its correct editorial preparation

Course-related learning outcomes

Knowledge:
Has extended knowledge of mathematics in the field of numerical methods used in optimization tasks, computer simulation, linear algebra, interpolation and approximation.
Has extended knowledge of modern construction materials such as carbon plastics, composites, ceramics, in terms of their construction, processing technology and applications.
Has extended knowledge of the standards for working machines in the field of methods of calculating and testing machines, safety, including road safety, environmental protection as well as mechanical and

electrical interface.

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.
He can design the technology of exploitation of a selected machine with a high degree of complexity.
Is able to use the acquired knowledge in the field of thermodynamics and fluid mechanics to simulate thermodynamic processes in technological systems of machines, using specialized computer programs.

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:

Learning outcomes presented above are verified as follows:
Discussion, combined with the assessment of exemplary implementation of the transitional works.

Programme content

Scientific work - definition and unique features. Types of scientific works. The structure of the transitional work, language, style and editorial issues. The process of writing a transitional thesis (the genesis of the topic, preparatory activities, source materials). Citations and copyrights. The role of the promoter in the process of creating a job. Principles of evaluation of the transitional work. Basics of the theory of the experiment (research planning, building models of the research object, analysis of results)

Course topics

1. Scientific work - definition and unique features.
2. Types of scientific works. The structure of the transitional work, language, style and editorial issues.
3. The process of writing a transitional thesis (the genesis of the topic, preparatory activities, source materials).
4. Citations and copyrights.
5. The role of the promoter in the process of creating a job.
6. Principles of evaluation of the transitional work.
7. Basics of the theory of the experiment (research planning, building models of the research object, analysis of results)

Teaching methods

1. Lecture with multimedia presentation
2. Discussion, presentations of students

Bibliography

Basic
1. Leszek W., Badania empiryczne, wyd. ITE, Radom 1997.
2. Majchrzak J., Mendel T., Metodyka pisania prac magisterskich i dyplomowych. Wydawnictwo Akademii Ekonomicznej w Poznaniu, Poznań 2005.
3. Wisłocki K., Metodologia i redakcja prac naukowych. Wydawnictwo Politechniki Poznańskiej, Poznań 2013.
4. Pułło A., Prace magisterskie i licencjackie. PWN, Warszawa 2000.
5. Korzyński M., Metodyka eksperymentu. Wydawnictwo NT, Warszawa 2006.
6. Szkutnik Z., Metodyka pisania pracy dyplomowej. Wyd. Poznańskie, ISBN 8371773714, 2005
Additional
1. Leszek W. Nieempiryczne procedury badawcze w naukach przyrodniczych i technicznych. Wydawnictwo ITE, Radom 1999.

2. Polański Z., Planowanie doświadczeń w technice. PWN, Warszawa

Breakdown of average student's workload

	Hours	ECTS
Total workload	125	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)	121	4,00