



COURSE DESCRIPTION CARD - SYLLABUS

Course name

German [S1AiR1E>JNiem2]

Course

Field of study

Automatic Control and Robotics

Year/Semester

2/3

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

English

Form of study

full-time

Requirements

elective

Number of hours

Lecture

0

Laboratory classes

0

Other

0

Tutorials

60

Projects/seminars

0

Number of credit points

7,00

Coordinators

mgr Maja Rakiewicz

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Lecturers

Prerequisites

1.The already acquired language competence compatible with level B1 (CEFR) 2.The ability to use vocabulary and grammatical structures required on the high school graduation exam with regard to productive and receptive skills 3.The ability to work individually and in a group; the ability to use various sources of information and reference works.

Course objective

1.Advancing students' language competence towards at least level B2 (CEFR). 2.Development of the ability to use academic and field specific language effectively in both receptive and productive language skills. 3.Improving the ability to understand field specific texts. 4.Improving the ability to function effectively on an international market and on a daily basis.

Course-related learning outcomes

Skills:

Is able to obtain information from literature, databases and other sources also in a chosen foreign language [K1_U1 (P6S_UW)].

Can prepare documentation concerning the realisation of an engineering task in Polish and foreign

language [K1_U4 (P6S_UW)].

Is able to give a presentation of results on an engineering task in Polish and foreign language [K1_U5 (P6S_UK)].

Can use a foreign language at level B2 of the Common European Framework of Reference for Languages sufficient to communicate, as well as to read with understanding data sheets, application notes, equipment manuals and descriptions of IT tools [K1_U7 (P6S_UK)].

Social competences:

Is ready to critically assess his/her knowledge; understands the need for and knows the possibilities of continuous training - improving professional, personal and social competence, is able to inspire and organize the learning process of others [K1_K1 (P6S_KK)].

Is ready to prioritise in order to complete a task defined by himself or others [K1_K4 (P6S_KO)].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

1. Formative assessment: formal coursework assignments (presentations, tests)
2. Summative assessment: credit and exam. To obtain a positive assessment the student is obliged to pass the material covered by the program with at least 50%.

Programme content

As a result of the course, the student ought to acquire field specific vocabulary related to the following issues:

- Drones
- Robots
- Manufacturing automation
- Industry 4.0
- Smart home
- Sensors
- Laser
- Artificial intelligence

and to be able to define and explain associated terms, phenomena and processes.

Course topics

The program covers the following topics:

- Drones, types and uses
- Robot and its construction
- Classification and purpose of robots (e.g. industrial robot, cobot, humanoid robot...)
- The importance of automation techniques in production
- Industry 4.0, its objectives, advantages and risks
- Construction and operation of an automation system in an intelligent building
- Sensors, sensors in automatic control and robotics, types, applications
- Laser, its structure and principle of operation, applications
- Types of artificial intelligence, area of application, advantages and risks
- Technical presentations

Teaching methods

1. Presentation, analysis of topics/problems through examples shown on the board, lexical and grammatical tasks,
2. Language practice: discussion, teamwork, case study, linguistic and integration games,
3. Student's individual work, reading and listening comprehension exercises, writing practice.

Bibliography

Basic:

1. Steinmetz, M./Dintera, H.: Deutsch für Ingenieure, Springer Vieweg, Wiesbaden 2014
2. Schmohl S., Schenk B., Bleiner S., Wirtz M., Glaser J., Wempe-Birk A., Stetter M., Akademie Deutsch Band 4, Intensivlehrwerk mit Audios online, Hueber Verlag, München 2022

Additional:

1. Schmohl S., Schenk B., Bleiner S., Wirtz M., Glaser J., Akademie Deutsch Band 2, Intensivlehrwerk mit Audios online, Hueber Verlag, München 2020
2. Zettl, E.: Aus moderner Technik und Naturwissenschaft, Max Hueber Verlag, 2003
3. Guzik, D.: Wissenschaft im Alltag“, Kraków 2010
4. Fearn/ Buhlmann: Technisches Deutsch für Ausbildung und Beruf, Verlag Europa-Lehrmittel, 2013
5. Perlmann, M/Schwalb, S.: Sicher! aktuell B2, Hueber Verlag, München 2019
6. Literatura fachowa (online resources)

Breakdown of average student's workload

	Hours	ECTS
Total workload	175	7,00
Classes requiring direct contact with the teacher	60	2,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	115	4,50