# COURSE DESCRIPTION CARD - SYLLABUS

Course name
English [S1MiKC1E>JANG1]

## Course

Field of study
Microelectronics and Digital Communication

Year/Semester
1/1

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
45

Projects/seminars
0

## Number of credit points

4,00

## Coordinators

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## Lecturers

## Prerequisites

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

## Course objective

1. Bringing the language competence to at least B2 level (CEFR). 2. Developing the ability to effectively use both general academic language and specialized language relevant to the field of study across the four language skills. 3. Improving the ability to work with technical professional texts. 4. Developing the skills needed to function in the international job market and in everyday life.

## Course-related learning outcomes

Knowledge:
As a result of the course, the student:
1. acquires technical vocabulary related to programmable electronics and telecommunications;
2. defines and understands various issues within the scope of the field of study;

3.knows and understands grammatical and lexical rules of the English language and effectively uses them in various types of written and spoken communication;
4. knows the principles of formulating both functional and academic spoken and written statements, including the rules for conducting correspondence, presenting technical problems, and reporting research findings in various written and spoken forms.

Skills:
A a result of the course, the student:
1.is able to independently obtain and use information from various types of sources in English [K1_U01];
2. can formulate a text and deliver a presentation in English, explaining/describing a selected specialized topic in the field of ICT [K1_U01];
3. is able to discuss latest achievements in their field, based on specialized sources [K1_U01] [K1_U17];
4. can communicate in English in both professional and non-professional environments [K1_U01];
5. has language skills in the area of programmable electronics and telecommunications consistent with the requirements for the B2 level of the Common European Framework of Reference for Languages [K1_U01];
6. is able to independently plan and carry out their own work to improve language skills [K1_U18].

Social competences:
As a result of the course, the student
1. is able to work in a team, also in a multicultural environment, using their language skills [K1_K03];
2. is capable of thinking and acting in a creative and entrepreneurial manner [K1_K06];
3. can formulate opinions on the development and dilemmas of their field of study in English and express them in public speeches [K1_K05];
4. is able to effectively communicate their arguments in English and understands their importance a nd significance [K1_K05].

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The formative assessment may include:
1.Oral and written tasks and expressions
2. Control tests
3. Homework assignments
4. Projects/presentations
The concluding semester assessment may include:
1. Oral and/or written tests
2. Class Performance Evaluation
The summative course evaluation after after the completion of the 4th semester: oral and written examination.

## Programme content

1. Mathematics
2. Description and interpretation of graphs
3. ICT and electronics: definition and scope of interest
4. Information technology: history and latest advancements
5. Computer system components and functioning
6. Programming.

## Course topics

1. Numbers and basic mathematical operations
2. Elements of geometry
3. Methods of visual data representation
4. Description and interpretation of graphs
5. ICT: definition and applications
6. Electronics: definition and applications
7. History of computers: 5 generations of computers
8. Quantum computers and artificial intelligence

9. Computer structure: architecture, RAM, ROM, hardware, and software
10. Memory and data storage
11. Operating system
12. Programming and programming languages

## Teaching methods

1. Presentations, discussions, lexical and grammatical exercises, also online
2. Teamwork, project work, case studies
3. Individual work

## Bibliography

Basic:
Richards-Sopranzi S., Flash on English for Mechanics and Electronics, wyd. 2, Tecnostampa, Loreto 2016.
O'Malley K., English for New Technology Electricity, Electronics, IT and Telecoms, Pearson, Mediolan - Turyn 2012.

Additional:
Bailey S., Academic Writing: A handbook for international students, 3rd ed., Routledge, Nowy Jork 2011.
Banks T., Writing for Impact, Cambridge University Press 2012.
Brieger N., Pohl A., Technical English Vocabulary and Grammar, Summertown Publishing 2006.
Dignen B., Communicating Across Cultures, Cambridge University Press 2011.
Evans V., FCE Use of English, Express Publishing, 2nd ed., Express Publishing, Cambridge 1998. (lub inne dostępne repetytorium gramatyczne)
Glendinning E.H., McEwan J., Oxford English for Information Technology, Oxford University Press, Oxford 2006.
Grzegożek M., Starmach I., English For Environmental Engineering, Politechnika Krakowska, Kraków 2004.
Hewings, M., Cambridge Academic English, Upper Intermediate, Cambridge University Press 2012.
Kubot, A., Maćków, W., Mathematics and Graphs Vocabulary Practice for Academic English Studies, PHPUT, Poznań 2015.
McCarthy M., O'Dell F., Academic Vocabulary in Use, Cambridge University Press 2015.
Oshima A., Hogue A., Writing Academic English, 4th ed., Longman, Nowy Jork 2006.
Rajendra R.C.N, Fundamentals of Electronics, wyd. 2, Lightning Source Inc., 2022.
Ricca-McCarthy T. Duckworth M. English for Telecoms and Information Technology. Oxford 2018.
Watson, D., & Williams, H. (2019). Cambridge International AS and A level Computer Science. Hodder
Wright V., Taylor D., Cambridge IGCSE ICT, wyd. 2, Cambridge University Press 2016.
Selected online sources

## Breakdown of average student's workload

| | Hours | ECTS |
|---|---|---|
| Total workload | 110 | 4,00 |
| Classes requiring direct contact with the teacher | 45 | 1,50 |
| Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation) | 65 | 2,50 |