COURSE DESCRIPTION CARD - SYLLABUS

Course name
English [S2IBio1>JA]

Course

Field of study
Biomedical Engineering

Year/Semester
2/3

Area of study (specialization)
Bionics and Virtual Engineering

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
full-time

Requirements
elective

Number of hours

Lecture
0

Laboratory classes
0

Other
0

Tutorials
30

Projects/seminars
0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

Student should already have acquired language competence compatible with level B1 (CEFR). Student should also have the ability to use vocabulary and grammatical structures required on the high school graduation exam with regard to productive and receptive skills. Additionally, the student should be able to work individually and in a group and use various sources of information and reference works.

Course objective

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

Course-related learning outcomes

Knowledge:
5. Anatomy
6. Biomechatronics
7. Prosthetics

8. Artificial Heart
9. Cochlear Aids
10. Medical imaging
11. Targeted drug delivery systems.

Skills:
As a result of the course, the student is able to:
1. Give a talk/presentation on field specific and popular science topic (in English), and discuss general and field specific issues using an appropriate linguistic and grammatical repertoire
2. Express basic mathematical formulas and interpret data presented on graphs/diagrams
3. Formulate a text in English on a selected field specific topic

Social competences:
As a result of the course, the student is able to communicate effectively in a field specific/professional area, and to give a successful presentation in English. The student is also able to recognize and understand cultural differences in a professional and private conversation, and in a different cultural environment.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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The knowledge acquired during classes is verified by at least two pre-announced tests per semester. Each test consists of questions (mutliple choice and open questions) with different points. Passing threshold is 60%. Additionally, once a year, students prepare a presentation on a selected field ralated topic and receive points for class activity.

Programme content

A variety of topics in the field of biomedical engineering are discussed during the English classes including telemedicine, bionics, biomimetics and elements of bioethics with the use of AI. The purpose of the course is to familiarise students with technical subjects and the vocabulary related to it as well as some elements of B2+ grammar

Course topics

1. Definition and the scope of research of telemedicine;
2. Artificial tissue
3. Lasers in medicine
4. Biomimicry
5. Bioethical issues and gene editing
6. Ethical use of Artificial Intelligence.

Teaching methods

Vocabulary exercises, multimedia presentations, audiovisual materials, discussion of issues with examples on the blackboard, solving lexical and grammar exercises, integration and language games, discussion panels, pair/team work, individual student work (reading comprehension, listening comprehension).

Bibliography

Basic
Ibbotsen, M. 2008. Cambridge English for Engineering. Cambridge: University Press.
Ciecierska, J. / Jenike, B. 2010. English for Medicine, Warszawa: PZWL
Additional
Grzegożek, M. / Starmach, I.2004. English for environmental engineering, Kraków: Politechnika Krakowska
Grussendorf, M. 2008. English for Presentations, EDU

Hanf, B. 2001. Angielski w technice, Lektor Klett (Pons)
Internet sources:
www.howstuffworks.com
www.wikipedia.org
www.ted.com

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00