



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

German [S1MwT1>JNiem1]

### Course

Field of study

Mathematics in Technology

Year/Semester

1/1

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

polish

Form of study

full-time

Requirements

elective

### Number of hours

Lecture

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

60

Projects/seminars

0

### Number of credit points

3,00

### Coordinators

mgr Maja Rakiewicz

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### Lecturers

### Prerequisites

Knowledge: The already acquired language competence compatible with level B1 (CEFR) -[PQF 4] Skills: The ability to use vocabulary and grammatical structures required on the high school graduation exam regarding productive and receptive skills – [PQF 4] Social competence: 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 (familiarizing students with basic translation techniques). 4 Improving the ability to function effectively on an international market and on a daily basis.

### Course-related learning outcomes

Knowledge

As a result of the course, the student is able to

•the student ought to acquire field specific vocabulary related to the following issues: description of the line graphs, algebra, geometrie, planimetry, stereometry, functions, mathematical theorems;

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

#### Skills

As a result of the course, the student is able to

- give a talk on a field specific or popular science topic (in German), and discuss general and field specific issues using an appropriate linguistic and grammatical repertoire;
- express basic mathematical formulas and to interpret data presented on graphs/diagrams;
- formulate a text in German where he/she explains/describes a selected field in specific topics.

#### Social competences

As a result of the course, the student is able to

- 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 German;
- the student is 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:

Formative assessment: assessment during language classes: oral performance, written assignments, speech/presentation, tests

Summative assessment: credit

### Programme content

History of mathematics

Types of numbers, fraction, decimals

mathematical operations, powers, roots, logarithms

Numbers systems

Mathematical terms and symbols

Basic concepts in geometry, plane figures and solids

The role of functions in mathematics and technology

Types of sets

Famous mathematicians and their theorems

### Teaching methods

Brainstorming, Mind Maps, Snowball Technique

### Bibliography

Steinmetz, M./ Dintera, H.: Deutsch für Ingenieure, Ein DaF Lehrwerk für Studierende ingenieurwissenschaftlicher Fächer, Springer Vieweg 2014

Additional

1. Bindner, H.-Buhlmann, R.: MNF Hinführung zur mathematisch-naturwissenschaftlichen Fachsprache: Mathematik, Hueber Verlag, München 1992

2. Kotowski, S.: Słownik pojęć i kontekstów matematycznych, wydawnictwo Bila, Rzeszów 2010

3. Materiały online:

<http://www.kj.fme.vutbr.cz/deuma/online/overview.htm>

<https://www.mathematik.de/ger/information/landkarte/gebiete/gebiete.html>

<http://www.schulminator.com/>

<http://www.mathe-in-smarties.de/>

### Breakdown of average student's workload

	Hours	ECTS
Total workload	90	3,00
Classes requiring direct contact with the teacher	60	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00