



## COURSE DESCRIPTION CARD- SYLLABUS

Course name

German Course (mathematical)

### Course

Field of study

Mathematics in Technology

Area of study (specialization)

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Level of study

first-cycle studies

Form of study

full-time

Year/Semester

1/1

Profile of study

general academic

Course offered in

Polish

Requirements

elective

### Number of hours

Lectures

—

Tutorials

60

Laboratory classes

—

Projects/seminars

—

Other (e.g. online)

—

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer::

mgr Marta Wojciechowska

Responsible for the course/lecturer::

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### Prerequisites

**Knowledge:** the already acquired language competence compatible with level B1 (CEFR);

**Skills:** the ability to use vocabulary and grammatical structures required on the high school graduation exam regarding productive and receptive skills;

**Social competence:** the ability to work individually and in a group; the ability to use various sources of information and reference works.

### Course objective



- Advancing students' language competence towards at least level B2 (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 (familiarizing students with basic translation techniques).
- 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:

#### Tutorials:

- formative assessment: assessment during language classes: oral performance, written assignments, speech/presentation, tests;
- summative assessment: credit.

### Programme content

Update: 31.01.2020r.



**Tutorials:**

- history of mathematics;
- types of numbers, fraction, decimals;
- mathematical operations, powers, roots, logarithms;
- numbers systems;
- mathematical terms and symbols;
- basic concepts in geometrie, plane figures and solids;
- the role of functions in mathematics and technology;
- types of sets;
- famous mathematicans and their theorems.

**Teaching methods**

**Tutorials:** Brainstorming, Mind Mapps, Snowball Technique.

**Bibliography**

Basic

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

Additional

- Bindner, H.-Buhlmann, R.: MNF Hinführung zur mathematisch-naturwissenschaftlichen Fachsprache: Mathematik, Hueber Verlag, München
- Kotowski, S.: Słownik pojęć i kontekstów matematycznych, wydawnictwo Bila, Rzeszów 2010
- <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/>

**s Breakdown of average student's workload**

	Hours	ECTS
Total workload	90	3,0
Classes requiring direct contact with the teacher	60	2,0
Student's own work (preparing a presentation, preparing for tests, homework, preparing and final examination)	30	1.0