

Language Requirements for Your Studies



<https://iuk.one/LANG-EN.pdf>

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What is the purpose of this document?

A common problem in higher education is **underestimating** language requirements.

This document aims to raise awareness of this issue.

It provides guidance and tips for improvement.

Problem: Underestimating language requirements

The **working languages** of a computer scientist in Germany are German *or*¹ English.

Important

B1 or B2 proficiency in a working language is **not sufficient**.

The **required proficiency level** for studying and working in computer science is **C1**.

A **de facto C1** level of proficiency is necessary in **at least** one working language.

What matters is **actual language proficiency**,
not possessing particular certificates
or merely satisfying the (minimal!) requirements of the degree regulations.

¹more precisely: “and”, because many customers and colleagues speak German, while most reference manuals, specifications, and other texts are written in English.

Why is this so important?

Computer science **describes highly complex systems** and implements them according to customer requirements.

Computer science is a **collaborative undertaking** in which regular verbal and written communication with customers, users, colleagues, and many other people from **widely differing professional and cultural backgrounds** is essential.

Language is a **central interface** to LLMs and AI systems.
Their importance will **increase dramatically** in the future.

Where are these proficiency levels defined?

CEFR Common European Framework of Reference for Languages

Official specification:

<https://www.coe.int/en/web/common-european-framework-reference-languages/table-1-cefr-3.3-common-reference-levels-global-scale>

However, these documents are primarily intended for linguists...

What proficiency levels are there?

Level	CEFR designation	Approximate meaning
A1	Basic User	Beginner
A2	Basic User	Basic knowledge
B1	Independent User	Intermediate
B2	<i>Independent User</i>	<i>Upper-intermediate proficiency</i>
C1	Proficient User	Advanced
C2	Proficient User	Near-complete mastery

How do these proficiency levels compare?

Source: The data in the following summary were provided by Gemini.

Prompt

Compare the C1 and B2 language proficiency levels with respect to: purpose, reading, speaking, writing, and listening skills, typical vocabulary size in number of words, typical learning time in years of school instruction, and typical learning time in number of classroom hours.

Comparison of proficiency levels

B2 Everyday life, vocational training, some degree programs (music, art)

C1 University-level study, demanding professions (medicine, law, engineering)

	B2 (not sufficient)	C1 (sufficient)
Vocabulary	4,000–8,000	8,000–10,000
School instruction	5–7 years	8–9 years
Classroom hours	500–650 hours	800–1,000 hours

Skills: Reading and Speaking

Reading

- B2** You can understand the main ideas of complex texts on both concrete and abstract topics, including technical discussions in your own field of specialization.
- C1** You can understand a wide range of demanding, longer texts and recognize implicit meaning, including reading between the lines, irony, and subtle nuances.

Speaking

- B2** You can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without significant strain for either party.
- C1** You can express yourself fluently and spontaneously without much obvious searching for expressions. You can use language flexibly and effectively for social, professional, academic, and educational purposes.

Skills: Writing and Listening

Writing

- B2** You can write clear, detailed texts on a wide range of subjects and explain a viewpoint on a topical issue, giving the advantages and disadvantages of various options.
- C1** You can express yourself clearly, in a well-structured and detailed manner on complex subjects. You use complex sentence structures (e.g., passive constructions and the subjunctive) and cohesive devices (conjunctions and adverbs) accurately.

Listening

- B2** You can understand extended speech and lectures and follow even complex lines of argument, provided the topic is reasonably familiar. You can also understand most television news programs and feature films.
- C1** You can follow extended speech even when it is not clearly structured and when relationships are only implied and not stated explicitly. You can understand television programs and films without much effort.

General Recommendations

Courses: Attend language courses, certificate courses, and specialized language courses at universities, adult education centers, or language schools.

Make use of **digital resources**: the Internet, apps, vocabulary trainers, YouTube, Duolingo, ...

Practice: Read, speak, and write extensively and regularly.

Form **study groups** with native speakers and learn from them.

Use **tandem learning** with conversation partners, ideally from the same field of study.

Immersion

Leave your own linguistic environment as often as possible and immerse yourself, including in your free time, in the language and culture associated with the language you want to improve. Communicate with people whose command of the language is better than your own.

Specific Suggestions for Computer Scientists

Use LLMs effectively

Do not use LLM systems only for automatic language correction, but **also for learning** the language.

Sample prompt: Correct this paragraph. Change only genuine errors. Then explain my three most important types of errors and give me exercises to practise them.

Summaries

After each lecture, write a summary consisting of 5–10 complete sentences. Have it corrected by AI or by colleagues.

Error log

Categorize your own recurring errors and have them explained by LLMs or colleagues. Record errors in a notebook so that you can learn from them systematically.