Bachelor’s Entry Requirements

The goal of the admissions review process is to select from the pool of applicants those individuals who have shown the best capability and diligence expected of Charles University students. To apply for the Bachelor of Computer Science programme delivered in English you must

- hold or be working towards a School Leaving Certificate (Diploma) or its equivalent,
- meet the Reasoning Requirements, and
- provide sufficient proof of English Language Proficiency.

To submit your scores electronically, please use the following Institution codes:

TOEFL 3184 SAT 7249 ACT 6790 IB 000147

School Leaving Certificate (Diploma)

Depending on the country in which you completed secondary school or high school, you must submit the following documents:

- For applicants from Germany, Poland, Hungary and Slovenia: secondary school leaving certificate and, if the school certificate does not clearly show the content and scope of subjects that you have studied, also certified secondary school transcripts with an official translation into English or Czech (if issued in a different language to these).
- For applicants from all other countries: secondary school leaving certificate and also certified secondary school transcripts with an official translation into English or Czech (if issued in a different language to these).

If you have not yet completed your secondary education but you will complete it soon, let us know. You can provide us with the documentation later; however, you must have completed your studies before enrolment.

Reasoning Requirements

The table below summarizes the minimum Reasoning Requirements for the undergraduate Computer Science programme at Charles University in Prague; you must achieve the minimum score for at least one of the qualifications listed here or provide us comparable results for other recognized qualifications such as Irish Leaving Certificate, German Abitur, Bagrut in Israel, HKDSE in Hong Kong or STMP in Malaysia (specific required scores for other internationally recognized qualifications will be provided on request).

<table>
<thead>
<tr>
<th>Test</th>
<th>Minimum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT Composite Score (Math + Reading + Writing)</td>
<td>1650</td>
</tr>
<tr>
<td>SAT Subject Test in Mathematics, level I or II</td>
<td>700</td>
</tr>
<tr>
<td>ACT Composite Score</td>
<td>24</td>
</tr>
<tr>
<td>ACT Mathematics</td>
<td>24</td>
</tr>
<tr>
<td>International Baccalaureate Diploma</td>
<td>32</td>
</tr>
<tr>
<td>International Baccalaureate Mathematics HL</td>
<td>6</td>
</tr>
</tbody>
</table>
GCE AS Levels or GCE A Levels * (not including General Studies, Critical Thinking or Key Skills).

| A A B |

GCE AS Level or GCE A Level Mathematics *

| B |

Mathematics Entrance Test at Charles University in Prague, Faculty of Mathematics and Physics (optional) **

| 40 |

* Applicants who receive their A Level results after the application deadline will be given conditional offers in June or July on the basis of their predicted grades; the offer will be confirmed after the results come out.

** The entrance examination takes place in June 2016 in Prague, organized by the Faculty of Mathematics and Physics, Charles University. The entrance test consists of 10 problems, each worth a maximum of 10 points, for a maximum total score of 100. You might wish to look at a sample test (pdf). The entrance examination is not compulsory — it is an alternative to the other standardized tests.

Compliance with admission requirements for the Computer Science programme in the Czech language is an alternative to the above minimum Reasoning Requirements.

Applicants that will not sufficiently demonstrate the necessary reasoning requirements by May 9, 2016, or with their application, will be invited to take the entrance examination in Prague.

**English Language Proficiency**

All applicants must have an adequate command of English in order to enrol at Charles University. An applicant’s proficiency level in English may be demonstrated by various language tests; any language test results should not be older than two years. The only exemption from this requirement is for students who have completed at least two years of their previous education with English as the sole language of instruction in one of the following countries: Australia, Canada, Ireland, New Zealand, UK, or USA.

The table below summarizes the minimum requirements in the various tests of English that we recognize; you must meet the minimum score for at least one of the tests listed here, or provide us comparable results for other recognized qualifications (if in doubt please contact us to obtain specific required scores for other internationally recognized English Language qualifications).

<table>
<thead>
<tr>
<th>Test</th>
<th>Minimum score</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOEFL Paper / Computer / Internet based</td>
<td>550 / 213 / 80</td>
</tr>
<tr>
<td>SAT Critical Reading and Writing</td>
<td>550 in each part</td>
</tr>
<tr>
<td>ACT English and Reading</td>
<td>24</td>
</tr>
<tr>
<td>International Baccalaureate English</td>
<td>6</td>
</tr>
<tr>
<td>The International English Language Testing System (IELTS)</td>
<td>6.5</td>
</tr>
<tr>
<td>Cambridge ESOL FCE</td>
<td>A level</td>
</tr>
<tr>
<td>Cambridge ESOL CPE, or Cambridge ESOL CAE</td>
<td>Passed</td>
</tr>
<tr>
<td>City&amp;Guilds International ESOL, or City&amp;Guilds International Spoken ESOL</td>
<td>Expert level</td>
</tr>
</tbody>
</table>
Master’s Entry Requirements

The goal of the admissions review process is to select from the pool of applicants those individuals who have shown the best capability and diligence expected of Charles University students. To apply for our Mathematics or Computer Science Master’s programmes delivered in English you must

- hold or be working towards a Bachelor’s or Master’s diploma and provide a certified copy thereof; in cases required by law, a certification of equivalence of education must accompany the application,
- have sufficient academic background in the relevant fields (see below for details); this can be demonstrated by passing the specialized entrance examination in June 2016 in Prague that is organized by the Faculty of Mathematics and Physics, Charles University, or by providing transcripts (academic records) of your previous education accompanied by syllabi of the completed courses; promising students who do not have this background may be admitted with the provision that they complete the missing knowledge from Bachelor’s courses,
- have sufficient command of the English language; this can be demonstrated by providing your results in one of the standardized English tests that we recognize (see below for details).

You are also welcome to accompany your application by

- a statement of purpose in which you describe your reasons for applying to the proposed programme, your study and possibly also research interests and future career plans,
- letters of recommendation as recent as possible from professors and employers who can comment on your recent professional accomplishments and your qualifications for pursuing a Master’s degree in mathematics or computer science.

Academic background

In this paragraph we summarize the minimum knowledge required for applicants in the various study programmes and study branches offered at our faculty.

Master of Computer Science

Study branches Theoretical Computer Science, Mathematical Linguistics, Discrete Models and Algorithms: background in calculus, linear algebra, discrete mathematics, probability, logic, computer programming, algorithms and data structures, computer organization, and the theory of automata and formal grammars.

Master of Mathematics

Common requirements: A sound background in linear algebra, real and complex analysis, measure theory and probability theory.
Study branch **Mathematical Structures**: + group theory, mathematical logic.

Study branch **Mathematical Methods of Information Security**: + commutative and computer algebra, theoretical and applied cryptography.

Study branch **Mathematical Analysis**: + general topology, functional analysis, ordinary and partial differential equations.

Study branch **Numerical and Computational Mathematics**: + numerical mathematics, functional analysis, ordinary and partial differential equations.

Study branch **Mathematical Modelling in Physics and Technology**: + classical mechanics, functional analysis, ordinary and partial differential equations.

Study branch **Probability, Mathematical Statistics and Econometrics**: + mathematical statistics, Markov chains.

Study branch **Financial and Insurance Mathematics**: + mathematical statistics, Markov chains, financial mathematics.

Academic records demonstrating the necessary background must show the dates of enrolment and the subjects or courses taken, together with the units of credit or time allotted to each subject. The records must also include a complete description of the institution's grading scale or other standard of evaluation. Unless academic records and diplomas are routinely issued in English by the institution, the official records in their original language must be submitted with an authorized, complete, and exact English translation.

**Entrance examination – Master's programme**

Applicants who will not sufficiently demonstrate the necessary background listed above by 9 May 2016, or with their application, will be invited to take the entrance examination in Prague.

The entrance examination for a Master's programme at the Faculty of Mathematics and Physics at Charles University consists of four problems, each worth 25 points. In case of an incomplete solution a proportional number of points will be given. The maximum total score is 100. The minimum score for admission is 40 points out of 100. Depending on the study programme and study branch, the examination has the following structure:

**Master of Computer Science.**

All study branches:

- Computer Science (4 problems, e.g., logic, automata theory, programming, theoretical computer science)

**Master of Mathematics**

Study branch Financial and Insurance Mathematics:

- Mathematics (2 problems)
- Probability and Statistics (1 problem)
- Financial Mathematics (1 problem)

Other specializations:

- Mathematics (4 problems)

**English Language Proficiency**

The English language requirements are the same as for the Bachelor's programmes.