

Master's Study Programmes (following Bachelor's) 2012/2013

Criteria for admission to the Faculty of Informatics, MU

The requirement for admission to all Master's degree programs at the Faculty of Informatics, MU is to pass the entrance examination and to complete a Bachelor's or Master's degree programme, including the successful final examination attested by a certified copy of the diploma. Applicants submit a certified copy of a diploma at enrolment to the study at the latest (applicants from MU do not submit certified copy of a diploma).

Programmes: Informatics and Applied Informatics

The entrance examination is written and its aim is to verify the applicants' **basic knowledge in Computer Science and Mathematics**.

The remission of an entrance examination to the Master's studies may be requested by those applicants who successfully completed a Bachelor's degree in Computer Science or related fields or if he/she is the student of the final year of the Bachelor's studies in Computer Science or related fields. Such applicant must have the study average mark for the entire Bachelor's degree at no more than 2.00 (according to the grading scale corresponding to the ECTS principles used at MU; in case of different grading scale the applicant must contact the Office for International Studies of the Faculty of Informatics, MU), or must belong to the fiftieth percentile in his/her degree programme. The affinity of the study field will be considered when an application is submitted. The Dean can meet a request of each applicant only once.

An applicant for the remission of an entrance examination shall send a written request to the study department. The request must be delivered to the application deadline. The request will be accompanied by a Transcript of records with the study average mark from the Bachelor's studies, issued by the appropriate university (it is also possible to demonstrate an obtained percentile). If the applicant is already a holder of a Bachelor's degree, Transcript of records has to be issued after the study completion.

If the applicant is a student of the Bachelor's study final year, the Transcript of records must be issued no earlier than 4 months before the date of the entrance examination. This Transcript of records must be in Czech, Slovak or English, and possibly also in other languages after an approval of the Office for International Affairs. In case the applicant is studying or graduated a study programme at the Faculty of Informatics, MU, the Transcript of records is not required. Requested and unsolicited materials are not returned.

Programme: Teacher Training of IT for Secondary Schools

Graduates of a double-major Bachelor's degree programmes of MU or graduates who have obtained in previous studies a general Bachelor's degree in both fields of the selected teaching combination will be admitted this study programme. Graduates of a double-major Bachelor's degree programme implemented at MU may ask for remission of an entrance examination based on the results in the previous study. Other applicants have to pass an entrance examination at the faculty, which

implements the second study field of the selected programme.

To study the Master's study field Teacher Training of IT for Secondary Schools – extended approbation – only such students shall be admitted who have completed their university education at the Master's level in previous years and gained qualifications to teach mathematics or physics (in combination with other general education or professional course) at secondary schools. Applicants for study in this study field may ask for remission of an entrance examination on base of study results in the previous studies.

The general content and form of entrance examinations

The entrance test examines the ability of an applicant to study a Master's programme at the Faculty of Informatics successfully. It consists of questions concerning basic knowledge in computer science and mathematics and the form of a single-choice from five options offered. One point for a correct answer is added, and 0.25 points subtracted for an incorrect answer; for multiple selected answers or no answer zero points shall be counted.

Thematic areas for the entrance examination

1. Algorithms and data structures (complexity, sorting algorithms, basic abstract data structures and their implementation).
2. Programming (coding and interpretation of programs in common imperative programming language or pseudo-code, principles of object-oriented programming, main principles of imperative and object-oriented programming languages).
3. Databases (relational data model, normal forms, SQL, applications).
4. Computer networks (connection-less networks, ISO OSI and TCP/IP models, functions, addressing and main protocols of particular levels, switching and routing in IP networks, applications).
5. Principles of computer systems (numeral systems in computer practice, processors, memories, operating system, peripherals).
6. Software engineering (analysis and design of systems, modelling).
7. Sets, relations, functions (Cartesian product, power set, ordering, equivalence, bijection).
8. Logic (propositional logic, first-order logic, syntax and semantics, satisfiability, equivalence of formulas).
9. Mathematical analysis (properties of the function, limits, derivations, integrals).
10. Linear algebra (operations with matrices, linear functions, systems of linear equalities).
11. Graphs and graph algorithms (types of graphs, distance in graphs, graph connectivity, trees, graph search, spanning tree).

Criteria for an evaluation of the entrance examination

The entrance examination is evaluated only by a response form, which is scanned by a computer and electronically processed in a de-identified fashion. The response form is identified by an assigned identification number (application number), which

will be sent to applicant electronically and in a written invitation for the entrance exams. The determining factor of success in entrance exams is the percentile calculated according to the number of correct answers in the entrance examinations and exam's version which the applicant wrote. The percentile indicates the percentage of applicants with lower or the same performance.

Terms and method of application submission

Application shall be submitted **electronically**. An electronic application can be found at: <http://is.muni.cz/application/?lang=en>.

Applications are processed continuously, after paying the application fee. Invitations for the entrance examination or a decision on the remission of the entrance examination will also be sent continuously. Applicants outside the Czech Republic and Slovakia we highly recommend an early application submission (including the sending of a request for the remission of the entrance examination) and payment of application fee.

Applications deadlines:

Study in Czech from the Autumn semester 2012:	Feb 1 – Jun 1, 2012
Study in Czech from the Spring semester 2013:	Nov 1, 2012 – Jan 15, 2013
Study in English from the Autumn semester 2012:	Nov 1, 2011 – April 30, 2012

Dates of entrance examination:

Study in Czech from the Autumn semester 2012:	June 25, 2012
Study in Czech from the Spring semester 2013:	the turn of Jan and Feb 2013
Study in English from the Autumn 2012 semester:	May 31, 2012

The application fee: CZK 400, -

The expected number of admitted students:

Informatics	200
Applied Informatics	250
Teacher Training of IT for Secondary Schools	10