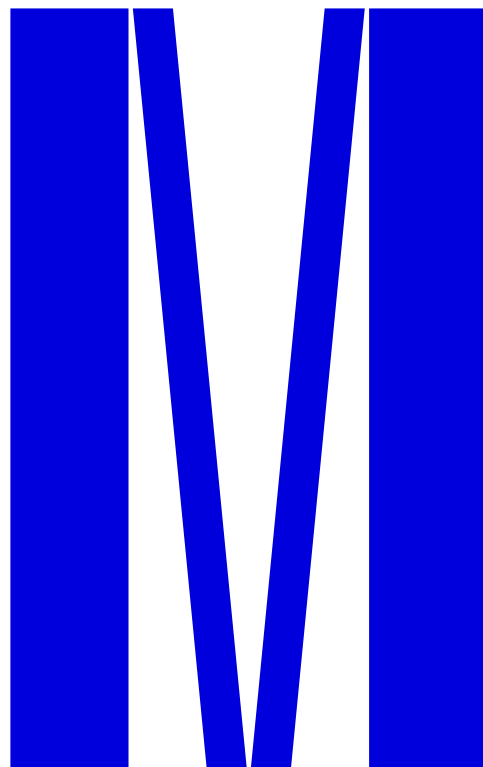
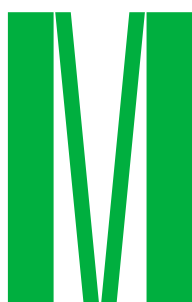


**Annual Activity
Report
Masaryk
university**



20



21

**MASARYK
UNIVERSITY**

Annual Activity Report 2021

Contents

Values	4	3 Internal Culture and Social Contribution Activities	30	6 Institutional Management and Infrastructure	54
Mission	6	3.1 Socially Beneficial Projects and Initiatives		6.1 University Budgeting	
Vision	7	3.2 Leisure Activities of University Associations		6.2 Financial Balance Sheet	
Opening words	9	3.3 Volunteering through MUNI HELPS		6.3 University Management during the Pandemic	
1 Teaching and Education	10	3.4 Sustainability in Surveys and International Rankings		6.4 University Operation in Compliance with Sustainability	
1.1 Masaryk University Students in Numbers		3.5 Activities of University Constituent Parts to Promote Sustainability		6.5 University Infrastructure and Facilities	
1.2 Masaryk University Entrance Examinations		3.6 Alumni Relations Development		6.6 Strategic Project Preparation	
1.3 New Degree Programmes		3.7 Awards Won by Employees and Students		6.7 Accommodation and Catering Services	
1.4 Events for Applicants		3.8 Cultural Events for Students and Staff			
1.5 Internal Quality Assurance and Assessment System		3.9 Library Services and Information Resources		MU Faculties and University Institutes	62
1.6 Feedback from Students, Applicants and Graduates				Faculty of Law	
1.7 Prevention of Student Dropout		4 Personnel Management and Employee Development	40	Faculty of Medicine	
1.8 Activities and Awards for Gifted Students		4.1 University-wide and Faculty-level Personnel Policy Measures		Faculty of Science	
1.9 Shared University Core Courses and Support for Entrepreneurship		4.2 Support for Creative Activities and Professional Development		Faculty of Arts	
1.10 Teaching During the Pandemic and Online Education		4.3 University Awards Granted		Faculty of Education	
1.11 Lifelong Learning at the University		4.4 Pedagogical Competence Development		Faculty of Pharmacy	
1.12 Lifelong Learning at the Faculties		4.5 Employee Training		Faculty of Economics and Administration	
1.13 Courses in Foreign Languages and International Marketing		4.6 Care for Employees		Faculty of Informatics	
1.14 International Mobility and EDUC Alliance		4.7 Ethics and Equal Opportunities		Faculty of Social Studies	
1.15 Foreign Language Teaching				Faculty of Sports Studies	
2 Research and Doctoral Studies	22	5 Information Systems and IT Support	48	Central European Institute of Technology	
2.1 Research Output Quantification		5.1 Significant IT Innovations at MU		Institute of Computer Science	
2.2 Support for Research Excellence		5.2 Development of MU Information System			
2.3 Winning Prestigious Grants		5.3 Learning Management Systems and Teaching Support		MU Organizational Structure	142
2.4 Application of Research Results		5.4 IT Infrastructure and Cybersecurity		List of Abbreviations	176
2.5 Conceptual Themes in Doctoral Studies					
2.6 Development Activities for Doctoral Students and Supervisors					
2.7 Awards for Doctoral Students and Graduates					

Values

Since its founding following the establishment of the Czechoslovak Republic, Masaryk University has always respected and professed values reflecting the republican and democratic ethos of that initial period. To this day, such values form the basis of its internal culture and are widely embraced by the academic community. These values are:

RESPECT

- Respect, as the basis of internal culture, solidarity and partnership in all negotiations. Respect for the principles establishing equal opportunities and transparency, as well as respect for the principles of academic ethics.

FREEDOM

- Freedom, respected and defended as a social imperative. Also, freedom as a principle of internal organisation of the university in the form of academic freedom of teaching and research or freedom of choice of students' own curriculum profile, but also as a principle of institutional autonomy of the university vis-à-vis the state.

RESPONSIBILITY

- Responsibility, emphasising the role of the university as a co-creator of public opinion, a solver of local and society-wide issues and a provider of a public service open to all. Also, the individual responsibility of students and staff reflected in respect for university rules and belonging to the university.



Mission

THE MISSION OF MASARYK UNIVERSITY IS TO CONTRIBUTE THROUGH ITS SCIENTIFIC ACTIVITIES, STUDENT EDUCATION AND SOCIAL ACTIVITIES TO THE HIGH QUALITY AND HEALTHY LIFE OF ALL GENERATIONS, AND TO A FREE, COHESIVE AND SECURE SOCIETY.

Vision

IN 2028, MASARYK UNIVERSITY WILL BE:

- An internationally-recognised research university and an excellent Czech higher education institution, setting trends in fulfilling all the roles of a university
- A university that is an inspiring community which, in its principles and daily activities, fully respects and fulfils the principles of social responsibility and contributes to meeting the Sustainable Development Goals, in accordance with which it leads its students and employees
- A university where education and science transcend the boundaries of individual disciplines, as it supports interdisciplinarity and the personalisation of studies, the creation of interdisciplinary research teams and synergies between workplaces
- A university where students are perceived as respected colleagues, with established processes and practices for cooperation with staff in solving important issues of the direction and functioning of individual agendas and the institution as a whole
- A university where teaching, research and social activities are an integral part of the professional portfolios of academic staff
- A university that is a responsible and demanding employer, acting according to the principles of transparency, equality and non-discrimination, supporting the achievement of professional goals and at the same time providing employees with a work-life balance
- A university that is demanding in its study requirements, whose graduates are successful personalities, with promising careers and an active approach to life, where they have diligently taken up the opportunities for development offered
- A university that is a model in its internal culture, in its ability to reach consensus, in the harmonisation of its components to the benefit of the university as a whole and in the integrity of a work and study environment characterised by high ethical and professional standards



Opening words

While 2020 will go down in history as the year of a pandemic that shook the world, our society and our institutions, we could call 2021 a year in the shadow of a pandemic. During it, we were forced to repeat the previous year in numerous variations. And again, we had to deal on a daily basis with tens and hundreds of practical, operational and logistical issues concerning the operation of a university in a crisis situation.

At the same time, the coronavirus crisis of the last two years showed the invaluable importance of higher education and the indispensable and strategic role of basic research and education. In the years leading up to the pandemic, we also debated at length – and often very theoretically – what the social role of a university should be. During the crisis, Masaryk University showed what the real social role and responsibility of the university is, including the provision of research infrastructures and expertise, as well as very specific assistance to individuals and institutions.

A special mention in this context should go to the Volunteer Centre of Masaryk University MUNI HELPS, which at the beginning of 2020 created a network of more than 4,500 volunteers, thanks to which our university was significantly involved in helping hospitals, children's homes, charities, nursing homes, crisis hotlines and city districts. We helped in a number of areas in 2020 and 2021, including in key activities such as testing and vaccination. In the summer of 2021, the volunteer centre joined forces with municipalities in southern Moravia to help those hit by a devastating tornado.

In the short period of its existence, our volunteer centre has given a helping hand to thousands of citizens and hundreds of institutions. It is therefore perhaps not too surprising that in 2021, the Volunteer Centre of Masaryk University was the only institution in the Czech Republic to be awarded the European Parliament's European Citizen's Prize.

Although our university had to substantially reduce its operations and address a number of epidemic problems in 2021 under the pressure of the global coronavirus crisis, I really appreciate that we did not lose sight of our university's long-term vision in this unprecedented situation; that we were able to work systematically, to prepare important conceptual materials and to implement strategic and developmental plans. I consider the discussion and approval of the MU Strategic Plan for the years 2021 to 2028 and the adjustment of the budget rules to take into account the qualitative parameters in education and research to be fundamental.

If I should name a few guidelines that I still consider to be key and strategic for the further development of the university in the current national and international environment, then it is an emphasis on quality and support of talent. This has a direct link to a well-thought-out and effective personnel policy.

Quality and development are the main principles which I have been trying to follow in the administration of the university since the beginning of my rector's mandate. And I believe that, for example, my election as the head of the Czech Rectors' Conference in the summer of 2021 is a certain appreciation of the work we do at Masaryk University and the way we think about issues of education and higher education. I personally try to be, not only through the Czech Rectors' Conference, a very active contributor to discussions on strategic issues such as school budgets, prioritization of research topics, internationalization, evaluation of science and research or improvement of quality in general. And all this in a situation of a growing demographic curve, which universities – and the entire political representation of our country – will have to reflect somehow.

As far as Masaryk University is concerned, I have a very clear idea of the direction in which to continue its development. Metaphorically speaking: we have a clear map and clear plans for the next steps. And, I believe, the right tools. It will now be about our ability to fulfill these visions and fulfill our plans, which, of course, requires and will require the involvement of all faculties and all parts of the university. And it will also depend to a large extent on their willingness to work together and share this common vision. A university is much more than just the sum of its parts. This is where its uniqueness, significance and strength as a social institution lies.

That is also why I would especially like to thank all the staff of the university, all my colleagues and all our students for their work and their commitment in serving Masaryk University and in spreading its good name. They are the prerequisite for the development and success of the entire university.

Martin Bareš

Rector

1

Teaching and Education

- 1 . 1 Masaryk University Students in Numbers**
- 1 . 2 Masaryk University Entrance Examinations**
- 1 . 3 New Degree Programmes**
- 1 . 4 Events for Applicants**
- 1 . 5 Internal Quality Assurance and Assessment System**
- 1 . 6 Feedback from Students, Applicants and Graduates**
- 1 . 7 Prevention of Student Dropout**
- 1 . 8 Activities and Awards for Gifted Students**
- 1 . 9 Shared University Core Courses
and Support for Entrepreneurship**
- 1 . 1 0 Teaching During the Pandemic and Online Education**
- 1 . 1 1 Lifelong Learning at the University**
- 1 . 1 2 Lifelong Learning at the Faculties**
- 1 . 1 3 Courses in Foreign Languages and International Marketing**
- 1 . 1 4 International Mobility and EDUC Alliance**
- 1 . 1 5 Foreign Language Teaching**



FIRST EVER ONLINE ENTRANCE EXAMS TAKEN BY ALMOST 15 THOUSAND APPLICANTS

The Learning Potential Test (LPT), a university-wide entrance examination, was organized in online form due to restrictions during the COVID-19 pandemic. The test, held on 24 April 2021, was accessible to applicants from the Czech Republic and abroad and it was taken by almost 15 thousand applicants. The first online entrance exam was a big challenge for the university, which had to adapt the test itself as well as take steps to prevent potential fraud. Each test comprised 48 tasks, which had to be completed in the pre-set order within 100 minutes.

Photo: Petr Květon and Helena Klimusová, test experts from the Faculty of Arts, who have been long-term guarantors of the preparation and organization of Learning Potential Tests at the university

1.1 Masaryk University Students in Numbers

Studies at Masaryk University were pursued by **7,608 students in the 1st years** of Bachelor's and long-cycle Master's studies in 2021. Most often, students choose **single-subject studies (72%)** or single-subject studies with a specialization (10%). The remaining share is major/minor studies. **Full-time mode** represents **88%** of all the studies. The majority of first-year students are **women** with **61%** representation, which has been a long-term trend.

Masaryk University annually welcomes new students from abroad. In 2021, **Slovak students** accounted for almost **14% of newly enrolled** Bachelor's and Master's students, with another 6% coming from other **foreign countries**, mostly Russia and Ukraine. The majority of students, approx. 80%, have Czech citizenship and most of them live in the South Moravian Region (41%).

The largest proportion of new students are fresh graduates from secondary school: **61% passed the school-leaving examination in the year of enrolment**. Grammar school graduates have prevailed in the 1st years for a long time. The share of grammar school students among the new MU students has been growing. Whereas in 2014, they accounted for 50% of all new students, in 2021, they account for **61% of all newly enrolled students** of Bachelor's and long-cycle Master's degree programmes. The first-year students of these programmes were the target of a **university-wide survey** conducted in November 2021. A total of **4,674 first-year students** participated in the survey, representing a 61% response rate.

At the time of questioning, in the first semester of their studies, **64%** of the participating students already considered themselves **part of the university community**. The studies at Masaryk University up to that point had met the expectations of 40% of first-year students who took the survey, and for 25% the studies had even been better than expected. A quarter (24%) saw the studies as different – neither better nor worse than they had expected.

Another area of the survey was the financial situation of first-year students. **83%** of the students surveyed said that the **costs of their studies** were covered by their **parents or relatives**. **48%** pay for their expenses from their **own earnings or savings**. The students could select several options in the questionnaire. As far as **work during studies** is concerned, **76%** of the participating students **consider** this option during their first years of studying.

The most important competencies to gain are **practical experience and skills**, the ability to argue, critical thinking and information management.

The results show that **42%** of the students surveyed are the **first generation of university students** in the family, which means that neither of their parents has a higher education degree.

1.2 Masaryk University Entrance Examinations

The COVID-19 epidemic, which peaked in the Czech Republic during spring 2021, had a significant effect on the organization of the admissions procedure at Masaryk University. As early as in December 2020, the university management made a strategic decision to transfer the **Learning Potential Test**, which is the most extensive part of the exams, **online**. The adapted *ROPOT* application in the Information System of MU was utilized for the administration of the online LPT.

The proper course of the testing was supervised through Microsoft Teams. Both **employees** and **doctoral students (479 persons)** supervised the online tests that were taken in **864 time slots**.

Altogether **16,933 applicants** were invited to the online entrance tests, of whom 14,960 actually took the test. The test comprised 48 items, divided into five sections (Verbal, Numerical, Critical, Analytical Thinking and English Language Tasks). The total test time was **100 minutes**.

The other forms of the admissions procedure were different from past years too. Many in-person exams were replaced with **online interviews and tests or with assessment of the applicants' motivation letters**. Physical fitness tests at the FSPs were cancelled; what remained was the basic Jacik test and pull-ups with an overhand grip. The faculties placed more importance than before on the secondary school results and participation in competitions.

The entrance tests were also taken by students with special needs. The tests for **368 applicants** were adapted by the **Teiresiás Centre**. The centre's staff created, for instance, a Braille printout with tactile graphics and 3D objects, an electronic version or an official translation into Czech sign language. Due to limited access to the online environment, some of the applicants took the exam in person. Applicants with special needs could take an **online preparatory course** for the LPT focused on the selection of the appropriate method of working with the test. For the first time this year, the course was also available to Roma applicants.

The preparation of an **adaptive version of the Learning Potential Test** continued. Some essential mathematical models based on item response theory as well as functions for the adaptive administration of items in the *ROPOT* application were implemented into the IS MU. **Pilot testing of the adaptive LPT functionalities** is planned for 2022 within the admissions procedure at the Faculty of Informatics.

1.3 New Degree Programmes

Several faculties continued to be involved in the design of new degree programmes as part of inter-faculty and interdisciplinary cooperation. The Faculty of Arts is preparing a profession-oriented Bachelor's programme called **Information Service Design**. It should be the first degree programme at Masaryk University to be conducted in **remote form exclusively using the online form of education**. The Faculty of Pharmacy offers a Bachelor's programme called **Cosmetic Products**, which will be followed by the Master's programme **Cosmetology and Cosmetic Products**.

In 2021, altogether **27 new degree programmes** in Czech and in English were accredited at MU.

The majority of these are taught at the Faculty of Arts. Of the 22 new programmes, 15 are doctoral, 6 are follow-up Master's and one is a Bachelor's programme entitled **Dutch Language, Literature and Culture**. One of the newly accredited Master's programmes is **Upper Secondary School Teacher Training in Aesthetic Education**, which includes critical discourse on individual branches of culture and art with overlaps into sociology, philosophy and psychology. The aim is to include aesthetic education into framework educational programmes for secondary schools.

The Faculty of Social Studies accredited a new follow-up programme in English, **European Governance**, taught in cooperation with the Faculty of Law, Economics and Governance of Utrecht University. The first students enrolled in 2021.

The Faculty of Law accredited a follow-up Master's programme, **Public Administration**, providing legal education for the performance of specialized and managerial tasks in public administration.

The Faculty of Medicine accredited a new doctoral programme, **Healthcare Simulation**, in both Czech and English versions. It aims to train independent researchers and academics in the emerging field of simulation medicine, which brings a wide scientific and technological potential. The programme will be taught at the newly established Department of Simulation Medicine of the FMed in close cooperation with several Brno workplaces. Several degree programmes accredited in 2020 started their teaching this year.

One of them is the English follow-up Master's programme **Visual Cultures and Art History** at the Faculty of Arts. It aims to guide students towards a comprehensive understanding of visual cultures from the Middle Ages to the present day and to promote research skills in academic and non-academic institutions. Since 2021, students have been able to attend the programme **Sound Design and Multimedia Technologies**. The innovative programme focuses on the creative use of sound for the needs of cultural institutions as well as sound design for theatre, film and other media.

The Faculty of Medicine welcomed its first students in the follow-up Master's programme **Dietitian**, graduates of which will be qualified for the profession of nutritional therapist. The programme will provide knowledge of nutritional issues in gastroenterology, psychiatry and intensive care.

The Faculty of Education started to teach the follow-up Master's programme **Pre-school Pedagogy** in the full-time mode.

The programme is intended for pre-school teachers who wish to support the development of children with disorders or special educational needs.

The Faculty of Economics and Administration opened several programmes targeting people who work in business. These are a combined-mode Bachelor's programme, **Business Analytics**, and English Bachelor's programmes **Business Management and Finance** and **Economics and Public Policy**.

The Faculty of Informatics opened new follow-up Master's studies titled **Software Engineering** with an emphasis on the guaranteed quality of the resulting software system. An integral part is practical training in software development and in how development teams function.

1.4 Events for Applicants

In 2021, the university continued in the successful communication campaign called **#munichallenge**. The special **Open Day** was again transferred to the online environment due to the epidemic situation. The event was attended by approx. 2,700 prospective students. The presentation of **MU at secondary schools** was held in **hybrid form** this year, involving seven MU ambassadors. The printed magazine **Study at MUNI** was distributed directly to schools and its digital version was available on the university website.

The communication between MU and 1,600 applicants through a chatbot **MUNIBot** was finished in February. This communication included a competition for tangible and intangible prizes, distributed to 150 winners. In the autumn, the university participated in **Gaudeamus**, the European higher education and lifelong learning exhibition (in Bratislava, Nitra and Brno).

The in-person form of MjUNI, the junior university, was suspended in 2021. However, in October, the new platform called **MjUNION**, an online portal for researchers of all ages, was launched. The portal presented educational topics prepared by researchers, students and employees. After the launch of the platform, 15 topics from various fields of science and disciplines across the university were published.

The Faculty of Economics and Administration offered secondary school students a wide range of possibilities to learn about economics topics. One of them was the **Economics Olympiad** or **Touch Econ**, a project that enables secondary school students to try certain courses at the faculty free of charge. The events included a correspondence competition called the **Economics Brains Seminar**. The three best competitors will be accepted at the faculty without an entrance exam.

The Faculty of Informatics and the Faculty of Science also offer a varied selection of activities and correspondence competitions. To name just a few: a **Correspondence Seminar in Informatics**, **Interactive Biology Seminar**, **Educational Course for Future Chemists**, **Brno Logic Game** and others.

The Faculty of Medicine has launched the **Junior Academy** project, which mediates contact between secondary school students and university teachers. The students can experience the faculty environment and see how research is done. In November, the Junior Academy organized a **Day with Medicine**, where the domain of medicine was introduced at five stations.

The fifth year of a **survey conducted among applicants** confirmed that Masaryk University is perceived as a **prestigious** and highly competitive university. A significant majority of applicants think they are sufficiently informed by MU and they are generally satisfied with what the university offers, whether it is the degree programmes or the e-application environment.

1.5 Internal Quality Assurance and Assessment System

Masaryk University is a holder of **institutional accreditation in 23 areas of education**. The quality of education and related areas are taken care of by the fifteen-member **MU Internal Evaluation Board (MUIEB)**, a central body assisted by **programme boards** as advisory bodies to degree programme guarantors, and **faculty coordinators for quality**, who provide methodological support to the academic staff. The MUIEB consists of MU academic employees, external academics and students.

In 2021, in its **10 sessions**, the MUIEB discussed 71 faculty proposals concerning degree programmes (transformation of the original fields of study into new degree programmes, approval of new degree programmes, renewal or extension of accreditation, changes to the profile of a graduate or the final state examinations).

In 2021, **internal evaluation of Bachelor's and Master's degree programmes** began. It will provide the programmes with formative feedback, help them formulate long-term goals and support their future development. The internal evaluation of each programme is performed by three evaluators (an external academic, a student of the programme and a representative of employers of graduates). The MUIEB also discussed the conception of evaluation of doctoral degree programmes focused on the specific features of this type of evaluation as well as on the synergy of doctoral programme evaluation and research evaluation at MU. At the end of the year, the MUIEB approved the schedule of degree programme evaluation for 2022, when all doctoral programmes should be evaluated with the participation of renowned evaluators from abroad.

Three thematic evaluations were completed, which directed the attention of the MUIEB to interdisciplinary areas of university education. The thematic evaluations focused on the **quality of final theses, internationalization in Czech degree programmes and doctoral degree programmes**.

The internal regulation *Masaryk University Degree Programme Quality Approval, Management and Evaluation Regulations*, which governs the essential features of the internal quality assurance system, was amended in 2021. The modification, effective from 1 March 2022, reflects the hitherto practice of the MUIEB in approving and evaluating degree programmes and the intention to synchronize the doctoral programme evaluation with research evaluation at MU.

1.6 Feedback from Students, Applicants and Graduates

Questionnaire surveys are an essential element of strategic planning and quality assurance at Masaryk University. Thanks to feedback from students, applicants and graduates, the MU management is able to make informed decisions. In 2021, **five regularly recurring surveys** were conducted. In the context of the COVID-19 pandemic, feedback concerning online teaching was incorporated into all surveys conducted in 2021.

The **Surveys** application in the **MU Information System** has undergone a major **innovation**, which now allows completion of a questionnaire in a user-friendly environment that is adapted to mobile devices. The first survey in the new application was **MU Applicants**, which addressed the largest target group of respondents so far; **25,039 persons** were asked to fill in the questionnaire.

Another round of the survey **Motivation and Expectations of Incoming Master's Students from Other Universities** ran from March to April.

Yet another survey included questions for fresh graduates of Master's degree studies and was entitled **Graduation from MU – Review and Perspective**. The survey runs throughout the year; the respondents are addressed from January to November.

The ninth year of the survey **Premature Termination of Studies at MU**, which forms the key source for ascertaining the causes and factors leading to student dropout, was conducted in 2021. Each year, about a fifth of the respondents across all levels of studies share the reasons for the fail rate.

A key survey with a high response rate was organized in the autumn among first-year students and was entitled **Freshmen at MU – 7,608 persons** were asked to complete the survey, of whom 61% participated. New topics in the questionnaire, relating to sustainable development, the university community or attitudes to online education provided valuable input for further development of the university in these areas.

An important representative of institutional inquiry remains the **Course Opinion Poll**, which is a unique university-wide tool that enables students to easily evaluate the instruction and their teachers. The tendency of a growing response rate continued in 2021; the questionnaire is completed on average by **40% of all students**.

In addition to the university's own surveys, MU participated in the nation-wide research **PhD STUDENTS Survey 2021**, which examined the situation of doctoral students at Czech higher education institutions.

1.7 Prevention of Student Dropout

The reasons for premature termination of studies at MU are annually mapped by the **survey of student dropout**, organized by the RMU Strategy Office. The responses of the **985 respondents** involved in the latest survey in 2021 suggest that most of them still leave their preferred studies, that is the studies that were their first choice.

The respondents attribute their failure in the first place to **insufficient motivation** followed by dislike for certain courses and a decision to take up other, more appropriate studies. The intensity of the determinants varies according to the type of degree programme. Whereas **Bachelor's students** state the **choice of other, more suitable studies** as their major reason, **follow-up students** most often state the **inability to harmonize studies and work**, giving preference to career and the necessity to earn money.

About two thirds of the responding students who have dropped out plan to apply for another HE programme. If they plan to study at a different HE institution than MU, it is mainly due to better accessibility or because they wish to pursue a field of study not taught at MU.

Academic staff were offered **ten seminars** dealing with the topic of student dropout, provided **at eight faculties** by the Student Advisory Centre in cooperation with the RMU Strategy Office. The website for academics addressing these issues was expanded. All the materials are available on the **Employee Portal** under the heading Teaching – Student Dropout.

The Student Advisory Centre is preparing, among other things, a policy for dealing with **sexual harassment** and other inappropriate behaviour on the MU premises.

The FEA examined the causes of unsuccessful completion of courses through opinion polls and questionnaires. In 2021, the faculty carried out an **in-depth analysis of key causes of student dropout**, and it plans to introduce measures for its reduction in the following years. At the same time, the faculty promotes the role of programme consultants.

The FLaw established the institution of a **student ombudsman**, through which it extended the forms of assistance to combined mode students in particular.

The FA promotes targeted communication with degree programme guarantors and it organized a workshop where it presented current data concerning student dropout. The FEdu organized three **round tables addressing student dropout** with consultants from the departments.

The FSS pilot tested a **new application for the prevention of study risks**, which uses the potential of the MU Information System and tries to prevent student dropout through various indicators, especially by detecting students who may be in danger of academic failure.

1.8 Activities and Awards for Gifted Students

The faculties offer various forms of support to gifted students, ranging from specific projects to scholarship programmes and awards.

The FMed set up the **Junior Academy**, which motivates talented secondary school students to study medicine. A special module of the degree programme *General Medicine* is a selective **P-Pool** scheme, which involves students in research from their very first year of study.

Selected students of the FEA participated in the faculty's **research and development** projects in 2021. The **TopSeC** project has become a stable part of faculty life, offering students a unique opportunity to regularly meet experts at interactive workshops.

A special programme for the **support of student communities** was announced at the FA.

Within its scholarship policy the FLaw promotes the writing of **Master's theses in a foreign language** and awards merit scholarships for excellent study achievements. In cooperation with the Jan Hus Educational Foundation, the faculty organizes the *I Stereotypes us et Societas Award* for a student essay with the most interesting suggestions concerning the role of law in society.

The best Bachelor's theses at the FSS are rewarded with the **Inocenc Arnošt Bláha Award**. The award in the form of a scholarship is won annually by 11 students nominated by heads of departments on behalf of individual degree programmes. Three scholarship schemes for gifted students' activities were established at the FSS and 102 students obtained a merit scholarship.

The FEdu acknowledged gifted students with the **Award for Outstanding Creative Activity**, won by seven students of the faculty in 2021. The faculty's support for excellent students continued through scholarship schemes.

The FPharm announced new scholarship programmes supporting **creative activities and excellent achievements**.

Students of the FI have a chance to win a **merit scholarship** awarded to successful students as well as to **promising first-year students**, based on the school-leaving exam and secondary school olympiads.

Talented students who represent the Czech Republic in Olympic disciplines may apply for a waiver of the entrance exam at the FSpS. In 2021, the faculty granted 53 such applications.

Excellent students are nominated for the **Rector's Award for the Best Students in Master's Programmes**. In 2021 the award was given to Gajane Achverdjanová from the FA, who specializes in the art of Late Antiquity. Another awardee was the successful FI graduate Ján Jančár, who during his studies contributed with two academic publications to basic research in the field of elliptic curve cryptography.

1.9 Shared University Core Courses and Support for Entrepreneurship

Masaryk University began selecting and preparing the first **courses of the shared university core** in 2021. It thus continued the previous year's activities when the general concept of the shared university core was designed. Each course is worth 3 ECTS and ends with a colloquium. Thematic areas of the courses are **The World in the 21st Century, People Between Nature and Culture**, and **Advances and Limits of Cognition in Natural Sciences**.

In the spring semester, the first 19 core courses were selected and prepared by their guarantors for pilot testing in the autumn semester 2021. The course guarantors met in the autumn to discuss the preparation and teaching of the courses. The second call in the internal competition was announced in autumn 2021, resulting in the selection of another 24 courses across the thematic areas.

The courses are selected by the committee under the guidance of the **Board for the Shared University Core**. The selection is subsequently discussed by the MU senior management and the MU Internal Evaluation Board. In 2022, the university plans to include further courses to make the courses offered diverse and to ensure sufficient capacity. At the same time, students' feedback will be gathered.

The year 2021 was a turning point at Masaryk University for the **promotion of entrepreneurship**. The MU Technology Transfer Office prepared the policy and strategy for the support of students' entrepreneurship, encompassing courses, seminars, internships as well as lifelong learning. Emphasis is put on expanding the courses offered to students and developing active cooperation with key partners.

In order to promote student entrepreneurship, an inter-faculty working group was established, which formulated key milestones and helped to achieve them. One of the cornerstones was organizing a pilot competition of student innovative ideas called **Start Your Business**. The aim of the competition is to develop the skills necessary for successful entrepreneurship and to motivate students to fully use opportunities and ideas. 125 thousand Czech crowns was divided between the five best teams. Innovative projects were awarded almost 200 thousand Czech crowns for the entire duration of the competition. In addition to the financial reward, the participating students were offered mentoring by experts, and one of the teams went on an exchange stay to France thanks to the competition.

Students can learn more about doing their own business in the courses **From UIN to CIN, From an Idea to a Business** and others.

1.10

Teaching During the Pandemic and Online Education

Even in 2021, Masaryk University had to respond flexibly to the spread of the coronavirus infection and associated anti-pandemic measures. The Rector periodically issued **extraordinary measures** in response to the government regulations; remote teaching methods, completion of courses, organization of final state examinations and the academic year schedule were modified.

The Internal Evaluation Board commissioned an analysis regarding the **substitution of student internships and practical training** in particular in degree programmes with a teaching specialization. The university managed to implement the student internship and practical training also thanks to the government's exemptions for medical, healthcare and pharmaceutical fields of study.

The MU faculties designed **93 new online courses** and substantially **innovated 151 online courses** as part of internal projects. The degree of use of online tools in instruction increased at all the faculties, and an emphasis was placed on mass lectures.

The faculties enhanced their central technical support for the preparation of **online teaching materials**. **Students from economically disadvantaged backgrounds** were provided with equipment enabling them to learn remotely; namely laptops, tablets, earphones and microphones. The faculties also introduced a system of loans of the devices. The Faculty of Law introduced **blended learning** into the remote education. The Faculty of Education opened an audiovisual studio and provided staffing and technical equipment. The faculty also actively worked on **DigiCompEdu**, a teachers' and students' portal for digital education, and organized a cycle of online meetings called **Inspiration Online**, where teachers shared their experience with online teaching.

The Faculty of Arts provided students with a new learning space – **Makerspace**, which allows access to technologies such as 3D printing or virtual reality. The aim is to provide educational content and access to digital technologies in order to support new directions and research opportunities in the humanities.

Masaryk University was interested in how students perceived online teaching during the pandemic, and therefore included relevant questions into institutional surveys including the course opinion poll. Thus, the university obtained direct feedback concerning remote education from students, graduates and applicants. The results show that a significant majority of them appreciate the efforts and actions of Masaryk University: according to the respondents, even **within the online mode teaching of an appropriate quality was provided**.

1.11

Lifelong Learning at the University

The university acknowledges the importance of lifelong learning and fully promoted its activities in the demanding year of 2021. Teaching in the time of anti-pandemic restrictions called for maximum flexibility: some of the courses were held in person, and some had to be taught online. In the end, the online form enabled people from more distant places or those who would not be able to attend the in-person courses for health or other reasons to participate in lifelong learning.

The **University of the Third Age (U3A)** celebrated its **30th anniversary** in 2021. An online series of lectures was organized on this occasion, given by former rectors of MU Jiří Zlatuška, Mikuláš Bek and Petr Fiala.

The basic U3A scheme comprises **one-year and three-year programmes**. The one-year programme includes courses *Cultural Heritage and Historic Preservation in Moravia, University of the Third Age and Moravian Museum*. The participants in the three-year programme may choose between the general course, which seeks answers to questions about a healthy and meaningful lifestyle in an advanced age or the course *Artworks and Forms of Their Historical Explanation*, guaranteed by the Faculty of Arts.

Educational events for older people under the auspices of U3A were also held at the **University Centre Telč**, where they celebrated their **15th anniversary of teaching**. Masaryk University and the National Heritage Institute in Telč created a course called *Medieval Etudes III*, which was taught at the University Centre in 2021.

In addition to regular long-term programmes, U3A offers short-term courses, special lectures, workshops and cultural events. In its work, it cooperates with various organizations, e.g. the Ministry of Culture, Brno Municipal Authority, National Heritage Institute, Moravian Library and Moravian Museum.

The university places a strong emphasis on fostering cooperation with international partners. The cooperation between U3A MU and **Danube University Krems** continued within the project *Music That Connects*. Lectures and concerts were held in Brno and Telč as part of the joint project.

Masaryk University strives to communicate science and stimulate interest in it among children and young people, to strengthen lifelong learning competencies and support intergenerational learning. Young researchers will be interested in the new **online platform MjUNion**. It was launched in autumn 2021 and most faculties and workplaces of MU are contributing to the creation of its interdisciplinary content. Science enthusiasts joined the activities of **Bioskop** – a science centre which held biology courses for small groups from April to October. Popular science videos and podcasts working with the theme of *Time* were created on the occasion of the national **Researchers' Night**.

1.12 Lifelong Learning at the Faculties

Many lifelong learning courses are provided by the MU faculties in the form of vocational and leisure time education as well as U3A courses.

A novelty in the area of cooperation in LLL was the new course **Management in Pharmacy** offered by the FEA together with the FPharm. The series of ten lectures focuses on the economic aspects of the management of pharmacies and business activities in the pharmaceutical industry. The FPharm contributed to lifelong learning within the University of the Third Age with the lecture cycle entitled *The Pandemic in a Society-wide Context*.

The FEdu in cooperation with St. Anne's University Hospital organized a course named **HOBIT – Biology Lesson for Life**. The course **Formative Assessment Supporting Student Learning** attracted a lot of attention too. The FEdu also addressed the general public with a new cycle of webinars called **Educational Insights**, which provides the views of experts on current issues concerning pedagogical practice and schooling.

The FEA offers a wide range of educational activities appropriate for **long-term professional training of staff**. These include courses in accounting, taxes, management, project management, law, analysis of data and legal information, as well as a wide range of language courses. The faculty organizes one-day and multi-day courses appropriate for improving skills in various professional and leisure areas.

Thanks to the internal development project, FA was able to create and offer new **online interest courses** for the general public, in particular relating to information and library studies. The online course *Greek for Travel: Language, Life and Institutions* was aimed at those interested in Greece as well as employees of travel agencies. Other specialized courses of the FA were designed for current and future teachers.

The FSpS expanded their online courses for the public. They included **courses on first aid and sports nutrition**, power yoga and Pilates for beginners, the essentials of correct movement patterns or basic movements in parkour. Courses for coaches in 2021 included *Coaching Courses for Rhythmic Gymnastics License Level 2 and 3*. The FSpS Lifelong Learning Centre together with the University Sports Centre prepared the **MUNIsportík city camp**, attended by 52 children.

The FLaw offered courses entitled **Introduction to Law for Senior Citizens**, which were held from November 2021 to February 2022. The FSS organized **six online winter schools for secondary school students** focused on social anthropology, contemporary European politics, international relations, sociology, social work, and public and social policy.

1.13 Courses in Foreign Languages and International Marketing

The development of **foreign language programmes** is one of the **internationalization priorities** for Masaryk University. Many faculties of Masaryk University offer studies in foreign languages in Bachelor's, follow-up Master's and doctoral programmes.

The Faculty of Arts accredited six new programmes taught in English in 2021. These were follow-up Master's programmes **Medieval Latin Language and Literature** and **Modern Greek Language and Literature** and four doctoral programmes: **Comparative Indo-European Linguistics**, **Classical Philology**, **Educational Sciences** and **Study of Religions**.

The Faculty of Social Studies accredited the new follow-up Master's programme **European Governance**, taught in English. The Faculty of Medicine has a new English doctoral programme called **Healthcare Simulation**.

The teaching of two Bachelor's degree programmes accredited in the previous year started at the Faculty of Economics and Administration in 2021: **Business Management and Finance** plus **Economics and Public Finance**.

Another major area of internationalization is the preparation of new courses in English. In 2021, the university prepared **80 online courses in foreign languages**, of which 21 courses used modern methods like **Blended Learning** or Collaborative Online International Learning (**COIL**).

Masaryk University also aims to increase the proportion of its international students studying in Czech or English. Therefore, it systematically focused on **marketing and promotional activities abroad** and during 2021 it participated physically at a trade fair in the Netherlands and virtually at trade fairs targeting students from Latin America, Japan and Europe. The university also participated at the ACAC and CAEI virtual trade fairs.

In autumn 2021, MU held its own virtual trade fair for international applicants – **Masaryk Virtual Open Days**. The fair comprised four events that targeted students in Latin America, USA and Canada, Europe and Southeast Asia.

In addition to everything mentioned above, the university continued to work on its **social media content in English**, especially on **Instagram**, where the popular format among the target group is “**takeovers**” from foreign students who use videos to show what their studies at MU are like. Similarly to previous years, the videos reached large numbers of people and the response was very positive.

1.14 International Mobility and EDUC Alliance

In spite of the pandemic, which severely affected international cooperation for the second year in a row, the main pillar of international cooperation at MU continued to be Erasmus+, which accounted for over 1,400 contracts with more than 700 universities.

In 2021, MU students participated in **1,125 study periods or internships abroad** with Erasmus+ funding 865 international mobilities, including 191 internships (of which 24 were for graduates). As in past years, the MU Centre for International Cooperation (CIC) held **Erasmus Days** in autumn 2021, an event aimed at increasing the number of international mobilities of MU students. Unlike in 2020, the format was not exclusively online; several faculties held the event in person or in hybrid form.

In 2021, MU admitted **883 exchange students** from other countries, of whom **104 studied online**. In the spring and autumn semesters of 2021, the *Orientation Week* was organized by the CIC for incoming international students. The event, held mostly online, was attended by 461 students.

After a one-year pandemic break, the CIC also held the traditional **training week for international staff** called **MUST WEEK** (Masaryk University Staff Training Week) for 52 employees from abroad.

Following positive experience with the online summer school, MU organized **two winter schools and three summer schools online**. Besides this, MU organized **three in-person summer schools in 2021**, which is significantly fewer than before the pandemic, when about 20 summer schools were held annually.

MU continued to be active within **the EDUC alliance** (*European Digital UniverCity*), which is part of the prestigious **European University Networks** funded by the EU. All partner universities began to offer joint specialized online courses in autumn 2021.

MU welcomed six members of the international committee that was sent by the Czech National Agency for International Education and Research (MEYS) to evaluate the **integration of MU into EDUC**. About 70 representatives of MU including teachers and students participated in the two-day international evaluation. The final evaluation report should serve the purposes of MU as well as the ministry in proposing further action concerning Czech universities involved in European university alliances.

The **international committee emphasized the long-term experience of MU** in designing programmes taught in foreign languages, and simplified procedures of recognition of credits obtained abroad. The allocation of financial and administrative support for the development of joint programmes and the overall promotion of internationalization (both within and outside of EDUC) was also highlighted.

1.15 Foreign Language Teaching

The **Language Centre (LC)** is the largest workplace of this type in the Czech Republic and it supports internationalization and innovative ways to enhance the language skills of students, MU employees and the public. In 2020, 24 international teachers from the LC provided foreign language teaching for professional, academic and specific purposes, assisted by 50 students from abroad within the popular project *Language Teaching Assistant*. The centre organized the international bilingual conference *Latin América Hoy* with 42 speakers.

In addition to teaching at the faculties, the LC opened lifelong learning courses of **Czech, Arabic, Chinese, German, French and English** for the general public.

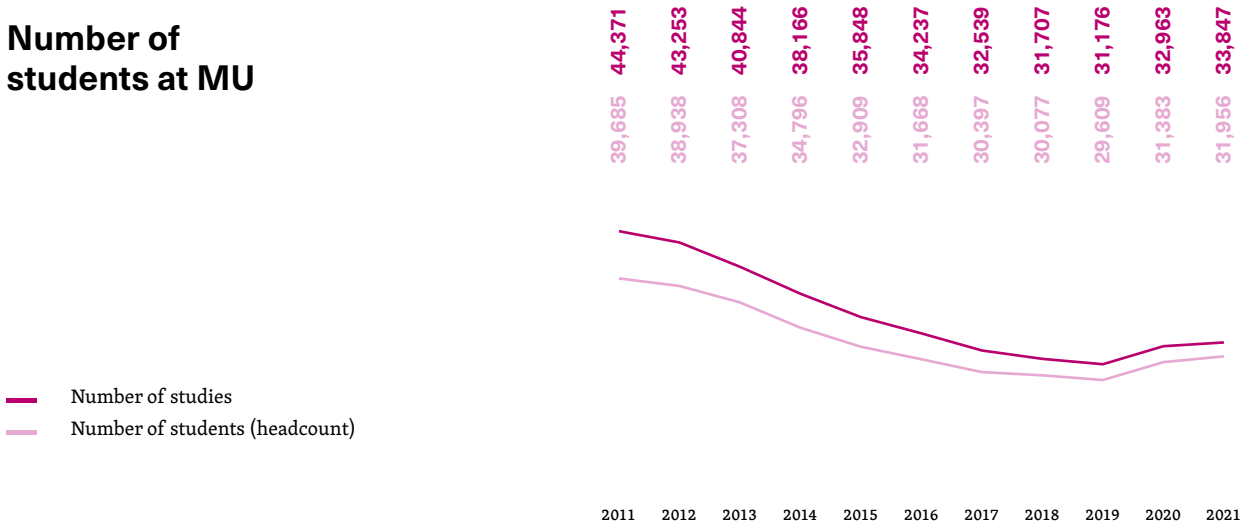
The courses of **Czech as a foreign language** were taken by 146 international employees and PhD students; 14 of them went through an intensive one-year course and 43 participants attended the **Colourful Czech** seminars.

Staff competencies were systematically enhanced through specialized seminars, summer schools and workshops for professionals, as well as the *LC Week*. In total, 51 PhD students were supported from the IGA project, 39 non-academic employees got funding from HR4MU and 125 finalized their projects within MUNI 4.o. The results of their activities were presented in 20 conference papers, 5 articles in scholarly journals and in a book *English Terminology for Teachers*. The LC organized **3 summer schools** for university staff focussed on extending the range of teaching resources. These were attended by 26 academics and 8 representatives of universities included in the EDUC alliance.

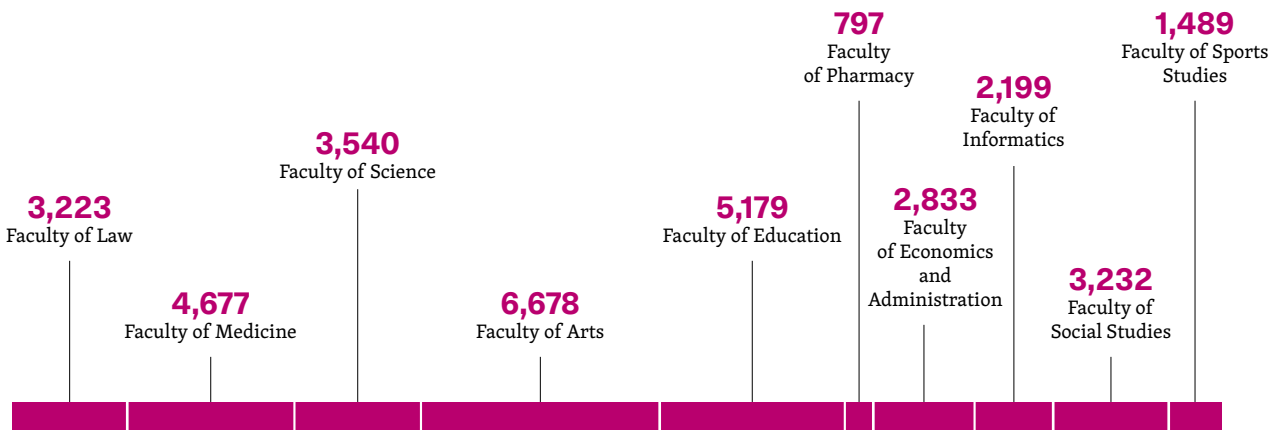
EDUC also contributed to the involvement of international students and teachers in the classes of English for students of law and informatics. Three projects were supported within the MU Institutional Plan: for example, the development of plurilingual competencies. The LC unit at the FEA prepared a course on *Business and Economic English* for the newly accredited degree programme, and five new online courses extended the teaching of languages at the FSci.

The LC started work on a new platform, **CZECH ONLINE – Czech as a Foreign Language for Specific Purposes**, and invited students from Tunisian universities to participate in the project *Communication and Enhancement of Mediterranean Cultural Heritage*. The LC continues to work actively in international professional organizations (Cercles, IATEFL and EULETA) and in the informal *Wulkow Group* and *Fiesole Group*. In spite of the pandemic restrictions, the LC organized a **Teaching Practice Week** with a record number of ten postdoctoral academics from the European University Institute in Florence, who taught at four MU faculties.

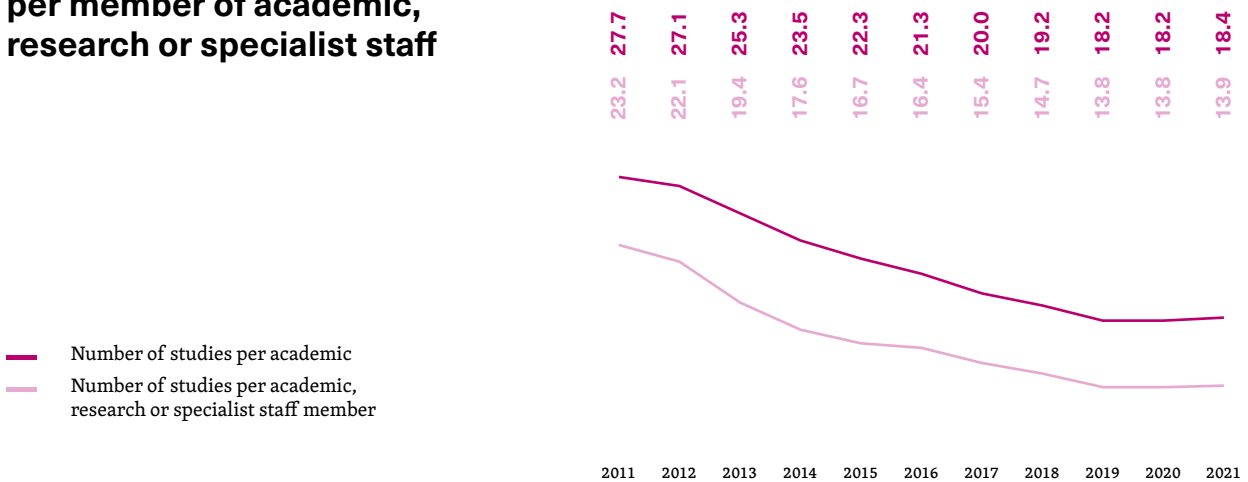
Number of students at MU



Number of students at MU faculties in 2021



Number of MU students per member of academic, research or specialist staff



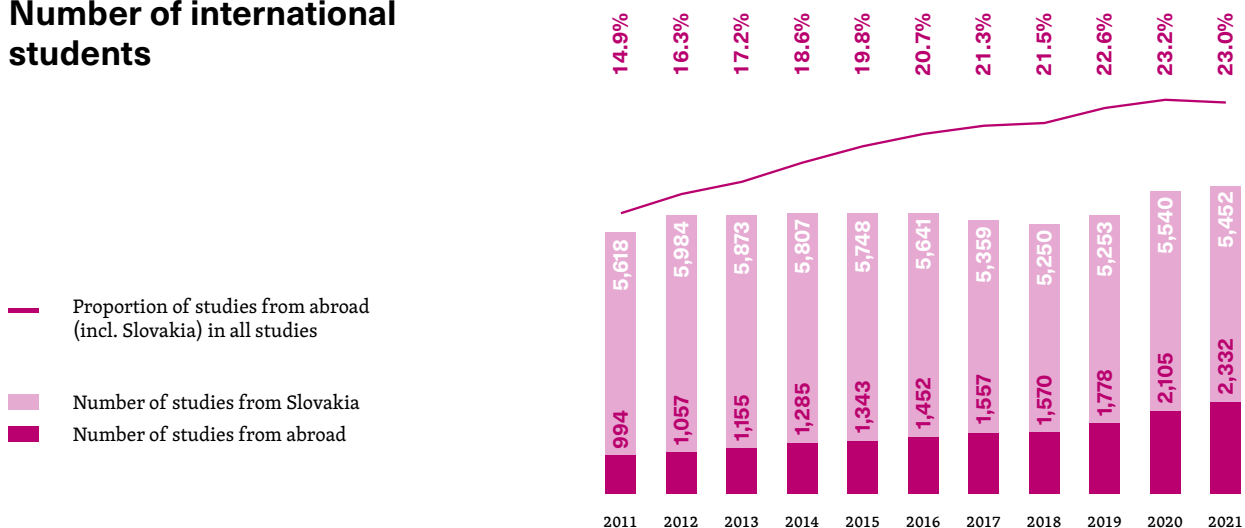
Association with MU from the perspective of its applicants



Studies at MU from the perspective of the Master's degree programme graduates



Number of international students



2

Research and Doctoral Studies

- 2 . 1 **Research Output Quantification**
- 2 . 2 **Support for Research Excellence**
- 2 . 3 **Winning Prestigious Grants**
- 2 . 4 **Application of Research Results**
- 2 . 5 **Conceptual Themes in Doctoral Studies**
- 2 . 6 **Development Activities for Doctoral Students and Supervisors**
- 2 . 7 **Awards for Doctoral Students and Graduates**



MU RESEARCHERS STUDIED THE GENES OF GREGOR JOHANN MENDEL

Masaryk University researchers provided unique information about Gregor Johann Mendel, the renowned scientist, who made his mark on human history by discovering the basic principles of heredity. The research was based on the archaeological excavation of the Augustinian tomb at the Central Cemetery in Brno and subsequent anthropological and genetic analyses of the findings. The research is led by the Vice-rector of Masaryk University, Šárka Pospíšilová, and involves almost twenty experts from the Faculties of Science, Medicine and Arts and CEITEC MU. Anthropological measurements revealed, for example, Mendel's height and his shoe size; biometric data of the skull were used for creating a superimposition of Mendel's face.

Photo: Vice-rector of MU and geneticist at CEITEC MU Šárka Pospíšilová leads a unique research of Gregor Johann Mendel's genome

2.1 Research Output Quantification

Masaryk University periodically monitors the research output of its constituent parts and individuals. A number of analyses for habilitation and professor appointment procedures are processed as well as **bibliometric analyses** that analyse data from the MU Information System and the multidisciplinary databases the Web of Science (WoS) and Scopus.

The analyses monitor the production, WoS and Scopus coverage, research visibility (prestige of specialized journals), citation index and collaboration. The **analyses differentiate between the specific publication practices** for the domain of natural sciences and social sciences and humanities. The authors are motivated to increase publication quality through performance-based funding at MU.

In 2021, MU authors published **2,259 scholarly papers of article and review** type indexed by the WoS. The number of publications in this selection has been growing each year and the proportion of papers published in prestigious journals ranked by subjects in WoS has been rising too. **45% of all MU papers of the article and review type** were placed in the first quartile (Q₁) in 2021, whereas in 2017 it was 39%.

In the Scopus database, there are **2,559 article and review papers** by MU authors, and their share in Q₁ was **61% in 2021**. Each of the databases uses different classifications based on the subject, and thus they cannot be compared. The share of WoS scientific publications created in **cooperation with international institutes** (excluding Slovakia) has long remained stable and accounted for **45%** in 2021. Most publications were created in cooperation with institutions in Germany (15%), the USA (13%) and the UK (10%).

The areas with a **high citation index** exceeding the median of the discipline in the period 2017–2021 were **biological and environmental sciences, physical sciences and medical sciences**. A specific citation indicator is Highly Cited in the WoS. These are publications that ranked among the top 1% of the most cited publications in extensive discipline-specific groups in the year of publication. The indicator suggests that the research concerned is of excellent quality. In 2021, this indicator was met by 33 MU publications in medical and environmental sciences, biochemistry, molecular and cell biology, and plant sciences.

To interpret the bibliometrics in social sciences and humanities better, the RMU Research Office closely monitors the assessment of papers by the WoS and Scopus due to the fact that the databases index SSH journals to a lesser degree and are not the only publication channel. The proportion of papers in scholarly journals in the WoS has been steadily growing from 61% in 2017 to 76% in 2021 for the whole of MU; in Scopus, the 2021 representation is 77%. As far as books are concerned, MU has created a **list of high-quality publishers** who guarantee the expected quality of production.

2.2 Support for Research Excellence

Excellent researchers of Masaryk University were supported by its Grant Agency in 2021 through its grant schemes **MUNI Award in Science and Humanities (MASH)** and **MASH Junior**, which is targeted at promising researchers shortly after their PhD. It aims at the creation of conditions for the achievement of early research autonomy and application for an ERC grant. The university announced a special grant scheme for researchers from Belarus – **MASH Belarus**. Other grant competitions aim at interdisciplinary research projects (the **INTERDISCIPLINARY** programme), support for researchers after a career break called **Career Restart**, and promotion of international grant applications, entitled **HORIZONS**. The second year of **MUNI Scientist** awarded prizes to 39 researchers for outstanding results in their work.

The projects that won the competitions in 2020 and started in 2021 included three interdisciplinary research projects, seven MASH Junior grants, one MASH Belarus and six Career Restart projects. The **GAMU ERC Support Scheme** funded 12 projects that applied for ERC grants in 2021. One project in the *Starting Grants* call and one project in the *Consolidator Grants* call proceeded to the second round of evaluation.

Masaryk University agreed on the establishment of an **Expert Group for the ERC at the national level**. MU scholars interested in applying for an ERC grant were informed about local and national support options at the **Grants Week** on 14 October 2021. In 2022, the internal support scheme for ERC applicants will be partially revised to maximize synergies with the National Expert Group.

The support for **Marie Skłodowska-Curie Actions** projects focused mainly on individual Postdoctoral Fellowships (PF), which were promoted through informative seminars for faculty project managers, supervisors, and the candidates themselves. It was essential to provide individual consultations for project proposals and comprehensive guidance through the preparation and submission process. Compared to the H₂O₂₀ average, the number of submitted projects doubled. Three proposals received European funding, and all four MU applicants for a fellowship at an institution abroad were successful.

The institutional strategy of long-term **advancing of research excellence** is promoted through the system of **budgeting indicators**. Two groups of indicators are used: for STM (Science, Technology and Medicine) and SSH (Social Sciences & Humanities).

The Vice-rector for Research and Doctoral Studies, Šárka Pošpišilová, awarded **MUNI Scientist** prizes on the occasion of the annual conference of the Grant Agency of Masaryk University. The award was received by **39 scholars** who had achieved extraordinary results in their research in the past year. The ceremony took place in the Mendel Refectory of the Augustinian Abbey in Old Brno.

2 . 3

Winning Prestigious Grants

In 2020, Masaryk University confirmed its ranking as the **most successful Czech institution in Horizon 2020** (H2020) calls so far both in terms of amount of funds and the number of approved project proposals. The number of approved H2020 projects with MU as the beneficiary was **119**, and their total budget exceeds EUR 52 million.

In 2021, the **implementation of 20 new H2020 projects** was started, of which nine were under Pillar I – *Excellent Science*, eight under Pillar III – *Societal Challenges*, and three were in associated initiatives. One of these projects is the prestigious INTEG-RNA, launched under the *Twinning* call. Two of the commenced projects under *Excellent Science* were **European Research Council Consolidator Grants**. Under the same pillar, Masaryk University succeeded in obtaining the only coordinated MSCA-RISE project in the Czech Republic in 2021.

The first calls for the new programme **Horizon Europe** were announced during 2021. Masaryk University was particularly successful in the area of *Research Infrastructures*, where several projects focused on current challenges were approved, from pandemic preparedness to cancer research to agriculture. The university also won a grant for the organization of the International Conference on Research Infrastructures **ICRI 2022**, to be held in October 2022.

At the national level, the university scored in another international evaluation of large research infrastructures (LRI), organized by the MEYS. The university was involved in 17 LRIs in the new period. In December 2021, the **European Strategic Forum for Research Infrastructures** (ESFRI) introduced an update to its periodically published roadmap with 11 new projects, two of which are connected with MU. At the European level, RECETOX coordinates the **EIRENE** project, which is focused on the assessment of environmental exposure. This is the second European research infrastructure coordinated from the Czech Republic. The FSS participates in the **Generations and Gender Programme** (GGP) as coordinator of the Czech node of the infrastructure aimed at collecting and processing data on the contemporary family and relationships between partners and generations.

The year 2021 was dedicated to the preparation of the *MU Open Science Strategy for 2022–2028*. The process resulted in the formulation of 24 strategic goals focussed on the development of **Open Access** and **FAIR data** principles at the university. The theme of *Open Science* was the cornerstone of project proposals for the *Horizon Europe* framework programme.

2 . 4

Application of Research Results

Masaryk University, through its Technology Transfer Office (TTO), established the **first spin-off platform for university-related companies** in the Czech Republic in 2021. The platform will assist in opening and deepening the cooperation with companies that apply university research results and will contribute to the social relevance of research.

A significant feat in 2021 was the award of a **prize by the Neuron Endowment Fund** for extraordinary interconnection of science and business. The laureates Vítězslav Bryja and Kamil Paruch from the FSci together with Radoslav Trautmann from the TTO received the prize for their activities related to the establishment of CasInvent Pharma, a company developing a **drug for leukaemia**.

The award **Innovation of Slovakia 2021** was won by the biomedical project *MicroRNA test of success of the in vitro fertilization (IVF) process and diagnostics of a quality embryo for the IVF process*. The project is implemented by the CEITEC MU, J. P. Šafárik University in Košice and Comenius University in Bratislava.

Masaryk University was granted **three important patents**. Three license agreements were concluded with international partners in connection with the patent *Enantis Thermostable FGF2 polypeptide, use thereof and culture medium containing thermostable FGF2 polypeptide*, a joint invention of MU and its biotechnological spin-off. The new trademark *Mindfulness Research and Practice Network of Masaryk University* was registered in 2021.

MU received 1,506,948 CZK for license and co-ownership agreements on the use of intellectual property. The income from internships, consultations and training increased in comparison with 2020 and amounted to 311,946 CZK. The university also gained almost 2 million Czech crowns from the economic activities of its spin-off companies, e.g. from the dividend in Netcope.

The four-year university-wide OP RDE project focused on the commercialization of research results was successfully completed in January 2021. Funding from TACR GAMA 2 continued and supported 17 **Proof of Concept projects**.

The cooperation with industrial partners under the trademark **Tested in Antarctica** continued in 2021. Testing has begun on a gravel stabilization system and a specially developed series of jackets.

The fourth year of the Business Research Forum – a trade fair of opportunities for cooperation between the university and the applied sector – was successfully organized in 2021. The **first year of MUNI Innovation Awards** for outstanding innovative achievements took place during the fair. From a total of 50 nominations, 17 laureates were selected, representing the FSci, FI, CEITEC MU, FPharm, FEdu, FA, FSpS, and the Teiresiás Centre.

The TTO continued to act as a significant member of the national platform **Transfera.cz**, whose chair is Eva Janoušková, the TTO director.

2 . 5 Conceptual Themes in Doctoral Studies

In 2021, a total of **2,777 doctoral students** were studying at the university, of which 18% were from Slovakia and **13%** from other **foreign countries**. PhD studies were offered in 106 degree programmes taught in Czech and in 74 programmes taught in foreign languages (mostly English).

Doctoral studies in 2021 were dominated by discussion about conceptual changes and innovations and the gradual introduction of them. MU issued its **Principles of and Recommendations for Effective and Quality Doctoral Studies**, which try to define the approach toward PhD studies at MU, their further course and development. **Vice-rector's Awards for Excellence in Doctoral Studies** were announced for the first time to acknowledge students who have completed their degree within five years with outstanding publications. The award also extends to their supervisors. The prize was received by 40 pairs of graduates and supervisors.

The RMU Strategy Office prepared the **Analysis of Dropout Rate in PhD Studies**, which examines factors accounting for premature termination of doctoral studies. The analysis focused on full-time and combined studies in 2008–2013 (i.e. 4,090 studies). The aim of the analysis was to determine which factors provably influence PhD candidates' success. The influence was analysed by statistical testing for independence of qualitative data (using a chi-square test) and demonstrated by descriptive statistics. The performed analysis suggests that strong factors showing a statistically significant correlation with successful completion of PhD studies are the amount of scholarship and, in general, the average monthly income received by doctoral students during their studies, plus their study results in doctoral as well as the preceding Master's programme. A higher completion rate is apparent in students who started their studies at a younger age, and those who participated in an international mobility.

Doctoral candidates who dropped out state their reasons in the survey of **Premature Termination of Studies at MU**. During the years 2013 to 2021, the survey addressed 2,757 PhD students and the average response rate was 23%. This means the questionnaire was completed by 613 students who dropped out. According to the survey, the strongest factors leading to premature termination of PhD studies were: *inability to harmonize studies and work, necessity to earn money / poor financial situation, giving preference to career, insufficient motivation to study, other personal or family reasons, and different/unfulfilled expectations*. The long-term stability of the obtained results allows for the use of these findings as baselines for a debate about reducing student dropout at MU.

Doctoral students at the FEA are assisted by the new **PhD Guide**, which clearly describes doctoral studies, what is expected of a doctoral student in the different stages of study to avoid dropout due to misunderstanding of the study concept. The faculty also introduced a system of an **interview between the applicant and the future supervisor** after the submission of the application. Attention was also paid to supervisors, namely to the quality of their recent publications and the percentage of successful doctoral students under their supervision who graduated within the standard period of time. In the event the

supervisors fail to meet the above criteria, they are not allowed to accept further PhD candidates. The faculty completed the setting of comparable requirements for the admission of students to Czech and English doctoral programmes.

The FSS faculty have agreed that student dropout must be addressed through various instruments aimed both at the students and their supervisors. Ideally, the **admissions** procedure should include an agreement between the PhD student and the supervisor concerning further income in the form of **grants** that could be expected by the student beyond the scope of their scholarship. Monitoring the quality of the supervisors' work through data has commenced and potential issues are discussed with the programme guarantor. The faculty has introduced the **standard of minimal requirements** for doctoral students' publications.

The FA organized an extensive **survey among doctoral students** as part of the HR Award. The results will be used by the thematic working group to define milestones for further development.

The FMed offers six doctoral programmes in English with 20 students who are paid the same scholarship from the faculty budget as Czech students. Such support aims at bringing **motivated PhD students from abroad** to the faculty.

The FEdu established the **(Post)doctoral School** supporting the PhD community and interdisciplinary cooperation. The school promotes closer cooperation of doctoral students through internal seminars, shared presentation of research activities, faculty-wide doctoral conferences, etc.

The FSci conducted an **analysis of supervisors' work** based on predefined criteria. The results were used by the faculty to formulate recommendations for improvement in particular degree programmes and their doctoral boards. The monitored parameters were numbers of students per supervisor, length of study, completion rate, and supervisor's grant resources enabling involvement of students in projects.

The FLaw adopted an amendment to the directive that stipulated the **unified requirements for doctoral theses**. The amounts of scholarships for the most valuable publications were increased for the purpose of **supporting high quality publications**.

2 . 6 Development Activities for Doctoral Students and Supervisors

The university offers various activities for PhD students and their supervisors in order to promote doctoral studies. Each semester, the students are invited to participate in the course **FRESHERS: Skills for Research Careers**, which focuses on developing the competencies necessary for a research career. The course aims at the enhancement of integration into national and international projects and research infrastructures. The theoretical course has been complemented with practical workshops.

In 2021, activities for doctoral students emphasized the development of strengths, mentoring or stress resistance. A series of webinars promoting publication activities of young researchers was organized in cooperation with Munipress. The first year of the workshop called **Na postdoc ven**, promoting postdoctoral stays abroad, was held in the autumn.

Interdisciplinarity is accentuated in the lectures delivered by foreign experts, the **MUNI Seminar Series**. In 2021, lectures in natural sciences were held, mostly online. Part of the series is the **Mendel Lectures**, in which top experts in their fields, including Nobel Prize winners, give lectures at Masaryk University. Two of these exclusive lectures were held in 2021: Andrew deMello from ETH Zurich spoke at MU in September, and Marek Mlodzik from the Icahn School of Medicine at Mount Sinai gave a lecture in October.

Supervisors could make use of a dozen specialized online workshops and webinars held during 2021. Workshops for doctoral boards were prepared to be launched in 2022.

The **PhD Day** in September 2021 was a result of cooperation between the CEITEC MU, FMed and FSpS. The event was held online due to the epidemic of COVID-19. Doctoral students at faculties located on the University Campus Bohunice are also now sent the **Events of the Week** newsletter.

In August 2021, the fifth year of the **Summer School for Doctoral Students** was held at the University Centre Telč, aiming at the improvement of pedagogical competencies and communication skills. The expanded version of the school with an English section was postponed to 2022 due to the pandemic.

The Faculty of Medicine organized a series of **BIOTOP Seminars**, which introduce PhD students to different career options outside academia with the aim of bridging the gap between academia and industry and introducing various job opportunities in life sciences. The guests were scientists who had worked in academia but decided to continue their research career in the private sector in the Czech Republic and abroad.

Interdisciplinary doctoral projects in life sciences and material science at the **CEITEC PhD School** are supported by the newly established **Jaroslav Koča Bridge Fund**. Students whose projects are approved get a scholarship of 10 thousand CZK and a lump sum of 50 thousand CZK toward consumables.

2 . 7 Awards for Doctoral Students and Graduates

As in previous years, PhD students at Masaryk University were very successful in the **Brno PhD Talent** competition, where 15 of them obtained financial support. The scholarship of 300 thousand CZK for the period of three years was won by 25 students of science or technology in Brno; nine were from the Faculty of Science, five from the Faculty of Medicine and one student was from the Faculty of Informatics.

Two MU doctoral students obtained prizes from the annual scheme of the **French Embassy in the Czech Republic**. Samuel Pastva, a PhD student at the FI MU won the competition for the best research work in the field of computer science, the **Joseph Fourier Award**. Adam Mertel from the FSci MU placed third in the **Jacques Derrida Prize** for humanities and social sciences for his cartography work.

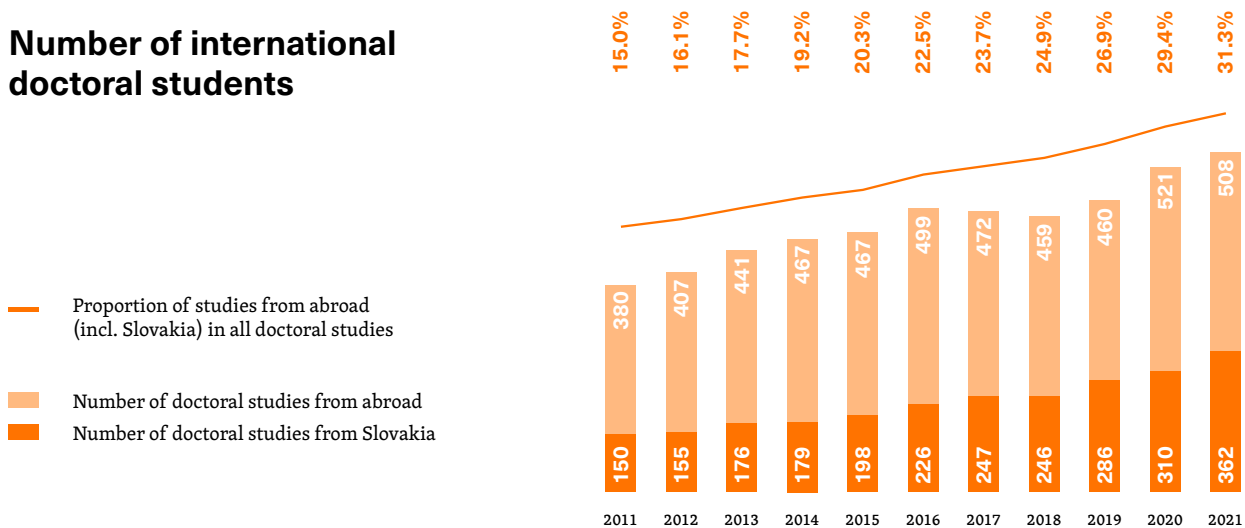
Patrik Gažo, a doctoral student and specialist at the FSS MU, was awarded the **Young Author Prize** at the **GERPISA 2021** international conference. Dominika Sladká from the FSS MU won the 1st degree **Edvard Beneš Award** in the field of sociology. Graduates of doctoral studies in sociology Jan Váňa and Alica Rétiová were successful in the **Miloslav Petrussek Prize** for the best student article in a scholarly journal.

The **Rector's Award for the Best Students in Doctoral Programmes** was obtained by three gifted PhD students: Katarína Bernátová from the Faculty of Science for her research focused on magnetron sputtering deposition and characterization of prepared thin films and subsequent diagnosis of the deposition process; Abanoub Riad from the Faculty of Medicine for pointing out the often overlooked COVID-19-related oral manifestations, a result of international cooperation with a clinical team; and Michaela Prišťáková, a PhD student at the Faculty of Arts, who worked in an international research team at the European Archaeological Centre in France.

The **Rector's Award for an Outstanding Doctoral Thesis** was given to three doctoral students: Cosimo Lobello from the Faculty of Science for his successfully defended thesis on the prognostic value of the mutational landscape in systemic anaplastic large cell lymphoma; Matúš Nemeč from the Faculty of Informatics for his thesis dealing with vulnerability of electronic security systems, which was written under dual supervision (cotutelle) in cooperation with Università Ca' Foscari in Venice. The last winner in this category was Jaroslav Stanovský from the Faculty of Arts for his doctoral thesis on the specific literary genre of the historical novel, focused on works about the civil war between the republicans and the royalists in western France.

Individual faculties of MU motivate doctoral students by means of **Dean's Awards**.

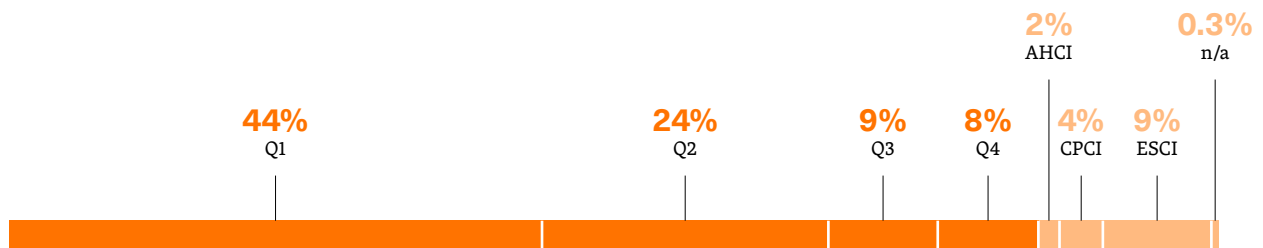
Number of international doctoral students



Proportion of 2021 publications in journals by quartile according to the Web of Science database

Articles, reviews and proceedings papers, inclusion into quartiles based on the impact factor

Note: Data for 2021 are not complete due to Web of Science indexing delay.



Proportion of 2021 publications in journals by quartile according to the Scopus database

Articles, reviews and proceedings papers, inclusion into quartiles based on the impact factor

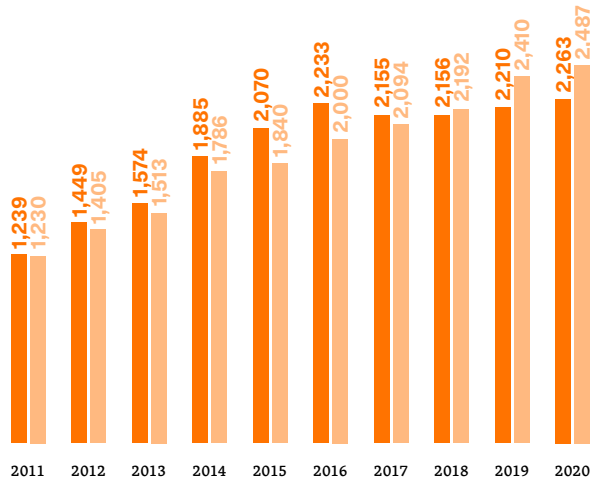
Note: Data for 2021 is not complete due to SciVal indexing delay.



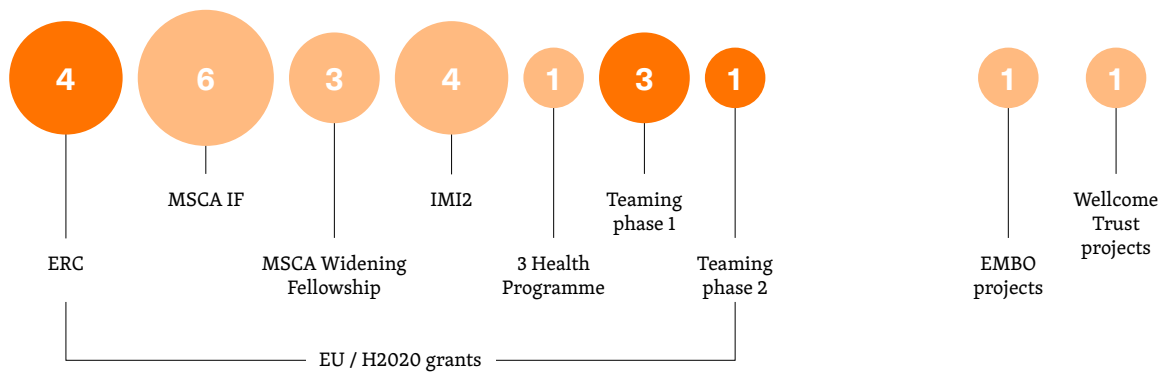
Number of MU authors' publications in the Web of Science and Scopus databases

- Web of Science - number of publications (articles, reviews and proceedings papers) issued in the given years
- Scopus - number of publications (articles, reviews and conference papers) issued in the given years

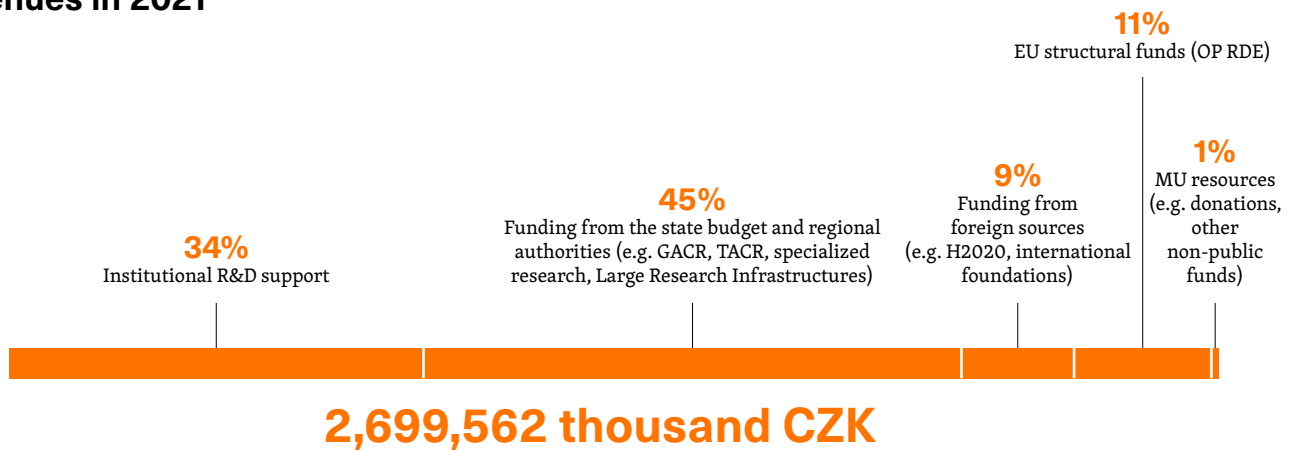
Note: Data for 2021 are not presented due to the indexing delay and the incompleteness of these data.



Prestigious grants awarded to MU researchers (investigation launched 2017–2021)



Structure of non-investment research and development revenues in 2021



3

Internal Culture and Social Contribution Activities

- 3 . 1 Socially Beneficial Projects and Initiatives
- 3 . 2 Leisure Activities of University Associations
- 3 . 3 Volunteering through MUNI HELPS
- 3 . 4 Sustainability in Surveys and International Rankings
- 3 . 5 Activities of University Constituent
Parts to Promote Sustainability
- 3 . 6 Alumni Relations Development
- 3 . 7 Awards Won by Employees and Students
- 3 . 8 Cultural Events for Students and Staff
- 3 . 9 Library Services and Information Resources



MASARYK UNIVERSITY VOLUNTEERS OBTAINED THE PRESTIGIOUS EUROPEAN CITIZENS' PRIZE

MUNI HELPS, the university volunteer centre, was established in response to the COVID-19 pandemic in the spring of 2020. The centre has managed to efficiently connect volunteers with organizations in need and individuals in difficult life situations. The volunteering activities of MUNI HELPS were acknowledged with the European Citizens' Prize, annually conferred by the European Parliament in the respective EU Member States. The centre was praised for its ability to provide long-term stable aid, for the launch of the database for coordinators and for the creation of a mobile application and its web form for volunteers and those in need. Besides assistance during the pandemic, the university offered help after the devastating tornado in South Moravia. For several months, volunteers coordinated help directly in the villages struck by the disaster.

Photo: University representatives who received the European Citizens' Prize on behalf of MUNI HELPS, the university volunteer centre

3.1 Socially Beneficial Projects and Initiatives

Masaryk University exercises its social responsibility through various activities across all its constituent parts. It strives to encourage social engagement of students, providing non-financial and financial incentives.

In the spring and autumn semesters of 2021, the Faculty of Arts taught a new course called **DOBRO_ARTS Volunteering**, which was completed by 100 students. The faculty in cooperation with the student association **Mise naděje** (*Mission of Hope*) organised the competition called *It Starts with an Idea* supporting student volunteer projects. Before Christmas, faculty employees sent over 700 postcards to elderly people within the project *Smile in a Mailbox*. Volunteers from the association **tutored children at the Dagmar Children's Home** and organized the **recruitment of bone marrow donors**.

As part of lifelong learning, the Faculty of Law offered a course of **Introduction to Law for Senior Citizens**, which provided information for consumers and basic legal advice from November 2021 to February 2022.

The Faculty of Pharmacy tried to raise awareness in the area of antibiotic resistance and its risks during the **Antibiotic Awareness Week** in November 2021. The faculty also responded to the call of the District Pharmacists Association Brno and students and employees helped as volunteers in the preparation of vaccines at the Brno Exhibition Centre under the guidance of the University Hospital Brno.

Each year, the MU Alumni and Friends Association decides on the distribution of grants to support civil society. In 2021, **TGM Grants** supported a project concerning *the exercise of children's right to the presence of their parents or guardians during medical treatment*, submitted by FLaw students. The project was granted 13,500 CZK to be used for qualitative data analysis, expanding awareness among the professional public, and improving the way parents and children are informed about their rights and duties.

Masaryk University has been a long-term partner to **EMIL OPEN – the European Youth Games for the Disabled**, which have taken place in Brno since 2011. During its history, the event has been attended by over 4,500 young athletes with escorts from 16 European countries.

The Medical Students' Association helped in the organization of the annual **Hospice Run**, a charitable event for St. Elizabeth's Hospice held in September. The run is open to the general public and aims at the promotion of hospice and palliative care. A month later, the Faculty of Sports Studies joined the **Run for Masaryk Memorial Cancer Institute** as part of the *Pink October festival* in Brno, which pointed out the importance of cancer prevention.

The Faculty of Medicine joined the campaign of the Brno Municipal Authority to promote blood donation and coordinated the **University Blood Donation Cup** in cooperation with other HE institutions in Brno.

The Faculty of Education took part in the organization of a **summer camp for children from tornado-stricken areas** of South Moravia. The faculty also intensely worked on the project *A Class*, dealing with assistance to **children with an autism spectrum disorder** at primary schools. During the year, FEdu

volunteers tutored children from socially-disadvantaged families and participated in a Tutoring Summer School.

During the pandemic, students of the Faculty of Education designed the **Tvořstor** platform, which offered a creative space for children who could not attend after-school creative clubs due to anti-epidemic measures.

Masaryk University was a partner and co-organizer of the fifth year of **Energy Community**, a prestigious summer school held at the University of Vienna in August 2021.

People with disabilities have been provided with the services of **Teiresiás** – Support Centre for Students with Special Needs for many years. The centre provides 80 places in publicly accessible lecture rooms and study rooms with 24/7 operation. The centre is a publisher of tactile literature, tactile graphics and maps, and has a video studio for recording documents in Czech sign language. Thanks to the experience and equipment of the centre, many MU units were able to transfer from in-person teaching to remote teaching in the emergency situation in 2021. The centre became the methodological guarantor of newly-created electronic documents with the necessary texts and subtitles (and when necessary with translation into Czech sign language) for live videoconferences and pre-recorded video documents.

The Rector of Masaryk University **Martin Bareš** was elected the new **chairman of the Czech Rectors Conference** in 2021. In his new office, the Rector will strongly encourage the **engagement of higher education institutions in dealing with current societal challenges**. HE institutions have enormous potential, both in terms of expertise including the appropriate infrastructure and in terms of resources – with thousands of students and employees who wish to benefit their communities.

3 . 2 Leisure Activities of University Associations

Activities of Masaryk University associations were strongly encouraged by the opening of the **new Clubroom in Komenského Square**, which was handed over to students on 15 June 2021. The rooms are fully equipped with computers and may be used for meetings, workshops or conferences. The primary purpose of Clubroom is to provide facilities to student associations, which fulfil the university's social role through various events, educational activities or sports competitions.

There are two dozen associations at the Faculty of Social Studies; for example **Fakescape**, which aims at enhancing media literacy and critical thinking. Fakescape was awarded the prestigious Charlemagne Youth Prize in 2021. A separate **scholarship programme** has been launched at the **FSS to support associations** mainly in the organization of discussions, lectures, exhibitions, theatre performances or cultural and environmental events.

The Faculty of Arts supports student associations through a special scholarship scheme announced twice a year. In 2021, an extra programme supporting the **development of student communities, informal relationships and help among students** was designed to overcome isolation and difficulties brought about by the COVID-19 pandemic. The largest volunteer association with twenty-year history is the **Student Endowment Fund of the FA**, which has organized cultural and social events, such as the *lantern parade on the occasion of the 17th November celebrations* or the multi-genre festivals *SemestrStart* and *SemestrEnd*.

Associations at the FMed play an important socialising and supporting role. International students meet in **MIMSA** (Masaryk International Medical Students Association), whereas Czech students have their **Medical Students' Association**.

The FEA has been supporting student associations **AIESEC Brno** or the **Investors' Club** for many years. The club organizes lectures, workshops and discussions with professionals and regular issues of the *Investories* podcast.

The main associations at the FLaw are **ELSA** (European Law Students' Association), **Faculty Theatre Company** and the non-profit organization **Právo 21** (*Law 21*). It also strives for the enhancement of legal awareness through a magazine bearing the same name.

A well-known association of the FI is the **Friends of Nordic Animals Association** which brings students together via events like *Schrödinger's Grill*, *Get to Know FI* or *Correspondence Seminar in Informatics*.

The **Pharmaceutical Students' Union** at the FPharm organises specialist lectures and seminars, cultural and social events and health awareness campaigns.

3 . 3 Volunteering through MUNI HELPS

MUNI HELPS, the Masaryk University volunteer centre, faced many challenges, which were resolved mainly thanks to the community of **3,300 volunteers**.

During 2021, MUNI HELPS contributed to the handling of the **COVID-19 crisis**. Volunteers helped individuals as well as hospitals, social service facilities and the like. Personnel in more than **40 institutions** in the South Moravian Region and beyond were assisted by MU volunteers.

Almost 500 volunteers helped individuals, mostly **tutoring children**, buying groceries for **older people** or accompanying them to the doctor. Because the learning outcomes of children from socially disadvantaged families significantly deteriorated as a result of remote classes, the centre in cooperation with the Faculty of Education created the volunteer programme **Tutoring Summer School**. Two summer schools were held during the summer vacation and the pilot run was attended by **43 children**.

Other volunteer activities included babysitting, answering questions in the **Student Legal Advice Centre**, taking people to the doctor, to offices and other individual help.

Volunteer aid in the **tornado-stricken villages** of south Moravia started at the end of June and continued during weekends through to autumn. More than **800 volunteers** gave a helping hand from removing rubble to restoring the landscape. In order to better organize the aid, MUNI HELPS joined forces with the environmental initiatives Hnutí Brontosaurus and Ekocentrum Důbrava Hodonín. Masaryk University launched a fundraising appeal to help the tornado-affected areas and managed to raise 1,000,000 Czech crowns, which was donated to the municipality of Hrušky for the restoration of its primary school.

The volunteer centre received several awards in 2021. The most significant one was the **European Citizens' Prize** received by MUNI HELPS representatives in Prague and then in Brussels. The centre also received the award of the Governor of the South Moravian Region for its help in eliminating the consequences of the natural disaster. The regional authorities also acknowledged several volunteers of MUNI HELPS for their work in social services.

The representatives of the centre participated in many events: JobNEST trade fair, *Science for Society* conference or *Dobropiknik* organized by the Diocesan Charity Brno. On 13 March 2021, MUNI HELPS **celebrated the first year of its existence**.

The centre also improved technologies necessary for its operation, especially by the creation of a **web version of its mobile application**. This has been an important asset for the coordination of activities.

3 . 4 Sustainability in Surveys and International Rankings

The sustainability of the university's operation has great support from its own students, evidenced by the results of 2021 **surveys** conducted **among first-year students** of Bachelor's and long-cycle Master's programmes. 92% of students thought it important that the university takes a **proactive approach to the challenges of sustainable development**.

The addressed students of the first years are often very active in the area of sustainability. As their comments suggested, they most often sort waste or try to produce as little waste as possible. Some of the respondents prefers to purchase environmentally friendly alternatives, reduce the consumption of animal products, and many referred to volunteer projects or activities they engage in.

In answering the question how the university could contribute to addressing the challenges of sustainable development, most respondents chose the option **sustainable operation of the university** (91%), i.e. measures to save energy, water, waste or to promote responsible procurement. The university should also **promote volunteering and activities of associations** and **raise awareness of sustainable development** among students, staff and the public (equally supported by 88% of first-year students).

The results of two international rankings reflected the shift in sustainability and the societal role of Masaryk University in 2021. The first one, **UI Green Metric**, which mainly focuses on the operational issues of sustainability, ranked MU as the **131st of 956 universities**, which is a year-by-year **improvement by 100 places**. MU achieved the best position in the categories of education and research toward sustainability, and environmentally friendly consumption of energies.

The second one, the **Times Higher Education Impact**, focuses on mapping the implementation of the UN Sustainable Development Goals by universities. MU placed **401st–600th among 1,115 world universities**. This was the first participation of the university in this ranking; the best results were achieved in the area of **high-quality education** with an emphasis on lifelong learning and an inclusive approach. **MU placed 101st–200th** in the fulfilment of this goal worldwide, thus becoming the **top-ranked Czech HE institution**.

Sustainable development issues are addressed on the website **sustain.muni.cz**, created in 2021. MU coordinated a joint project of 24 Czech public HE institutions as part of the Centralized Development Programme of the MEYS, which aims at joint action of HE institutions in the area of sustainable operation.

3 . 5 Activities of University Constituent Parts to Promote Sustainability

Masaryk University tries to apply sustainable principles in all its operations, and many initiatives come from the respective faculties.

The sustainability working group at the **FSS**, composed of students, academic and non-academic staff is an advisory body to the Dean and the secretary. The group meets three times a year and the faculty staff is regularly informed of its work in the faculty newsletter. The FSS opened a **bicycle room** to encourage the reduction of car transport by students and employees. Bins for **sorted waste** were placed in all kitchenettes and common premises of the faculty and the new lecture rooms were fitted with modern **energy efficient lighting**. Each year, the faculty co-organizes **EKOFILM**, the oldest European environmental film festival with international participation.

The **FLaw** consistently sorts waste and has included the standards of sustainable development into its tender procedures. The faculty building is gradually being fitted with environmentally-friendly lights; energy consumption is monitored.

The **FEA** continues to use the filtering and cooling water system **Filtermac**. The machine, which uses water from the mains, **saved 23,000 half-litre PET bottles**, which equals **600 kg of plastic**. Since the installation, approximately 2,100 kg of plastic has been saved. The operation of Filtermac is supported by KPMG and Home Credit.

The **FSci** supports the **Generation Mendel** project, which brings together students from Masaryk University and Brno University of Technology and which won the **gold medal in the international iGEM competition** again in 2021. The main aim of the competition is to find innovative solutions to both local and global problems using standardized biological components and basic molecular biology tools. Another well-functioning association is **Biomania**, which contributed to the launch of a waste sorting system on campus and which annually organizes the *Student Scientific Meeting* focused on biotechnology, bioengineering and biomedicine.

In 2021, the **FEdu** was preparing a strategy of responsible **reduction of their carbon footprint**, which will start to be implemented in 2022. The faculty has photovoltaic panels mounted on its roof, which generate electricity by direct conversion of solar radiation in a solar generator and supply it to the electrical grid in the building using special inverters.

3 . 6 Alumni Relations Development

Social events were prohibited for most of 2021 and so Masaryk University stayed in touch with its alumni through **five issues of the newsletter**. In response to the growing interest by alumni in university news, the newsletter was sent to 45,000 e-mail addresses in 2021.

The FEdu organized the fifth year of the **Awards for the Outstanding Graduate of FEdu MU – Teacher of the Year 2021**. The awards were distributed among five graduates. The faculty also published four issues of the *Komenský journal* – a magazine for primary school professionals.

The FI has a section of **Alumni Success Stories** on its website, where successful graduates working in various industries are introduced by means of interviews. The faculty cares for its alumni community through a LinkedIn group.

The Department of Sport Pedagogy of the FSpS organized an **Alumni Meeting** in March 2021, which included presentations on Teaching during the COVID-19 pandemic.

The FPharm started sending **newsletters to alumni** and conducted a survey on the professional life and employment of graduates. The faculty keeps in touch with its alumni by means of cooperating with research organizations and professional bodies.

Significant events at the FLaw were conveyed to alumni through the alumni newsletter, as well as through a **series of videos from the faculty's history** published on its YouTube channel.

The exhibition **Important Personalities of Masaryk University** was displayed in the public space of Moravské Square, where notable figures of the university's history were portrayed by students of the Faculty of Education.

The MU Career Centre focused primarily on online advising in 2021. Various online communication channels, in particular social media and the new website **kariera.muni.cz**, were used to maintain relationships with alumni. Traditional events interconnecting studies and job opportunities included JobNEST and JobChallenge trade fairs and JobAcademy. The Career Centre continued to administer the university careers portal **JobCheckIN** with 10,440 registered students and graduates.

Masaryk University addresses alumni through questionnaire surveys. The year-long survey **Graduation from MUNI – Review and Perspective 2021**, directed at fresh graduates from Master's studies, was conducted again. The survey looks into the transition from studies to careers and the related evaluation of Masaryk University. The questionnaire was completed by **1,109 respondents**, which means a 40% response rate.

3 . 7 Awards Won by Employees and Students

Two **Czech Science Foundation (GACR) President's Awards 2021** were received by MU faculty. The first awardee is Professor Vladimír Šindelář from the FSci; the same award was received by Professor Klára Šedová from the FA.

Three young MU researchers were awarded the prestigious **JUNIOR STAR grant of GACR**. The grant went to Filip Hrbáček from the FSci, David Sehnal, who works at the FSci and CEITEC MU, and Madalina Bianca Moraru from the FLaw.

In 2021, Masaryk University won a **prize awarded by the Neuron Endowment Fund** for an extraordinary interconnection of science and business. Scientists Vítězslav Bryja and Kamil Paruch together with Radoslav Trautmann received the prize for their activities related to the establishment of CasInvent Pharma, a company developing a drug for leukaemia.

The team led by Jan Strejček from the FSci with their Symbiotic tool won the gold medal in the categories **MemSafety and SoftwareSystems** in the world competition of software-verification tools SV-COMP 2021. Barbora Bührenová and Pavel Zezula from the FI were named among the **Top IT Personalities of 2021** by the Computerworld magazine.

The cytogeneticist Terezie Mandáková from CEITEC MU received an important world award. She is the winner of the **L'Oreal-UNESCO for Women in Science** competition, which supports women scientists in their research and helps create better working conditions.

The prestigious **Werner von Siemens Award** for the best educational professional was won by Petr Štourač, head of the Department of Simulation Medicine of the Faculty of Medicine MU. Two teams of students from the Institute of Public Health of the FMed took the first two places in the **Angelini University Award 2021**.

Samuel Pastva, a PhD student at the FI won a competition for the best research work in the field of computer science, the **Joseph Fourier Award**. Adam Mertel from the FSci placed third in the **Jacques Derrida Prize** for humanities and social sciences.

The **Ilya Repin International Art Award** was awarded by Ukraine to Petr Kalina from the FA for the promotion of Ukrainian culture in the Czech Republic.

Jiří Fajkus from CEITEC MU has become a new member of the prestigious **European Molecular Biology Organization (EMBO)** and now ranks among the world's leaders in research.

Lukáš Potěšil from the FLaw received the Commemorative Medal of the Legislative Council of the Government. The **Prize of the Minister of Health** for medical research was awarded to the team led by the head of the Institute of Histology and Embryology of the FMed, Aleš Hampl.

Jiří Poláček from the FEdu was acknowledged for his contribution to the fame and reputation of the **South Moravian Region**. Jiří Fajkus, the head of a CEITEC research group and an internationally recognized expert in the field of telomere biology, received the award for contribution to science.

MU students were awarded the award **Tinderbox for Best Volunteers of South Moravia**.

3 . 8 Cultural Events for Students and Staff

The **Masaryk University Centre for Culture, Art and Events** commenced its activities in 2021, aiming at promoting the cooperation of MU units to fulfil the university's cultural role. It is a loose association of the MU Archives, Masaryk University Press, Mendel Museum, University Cinema Scala, and University Centre Telč.

The anti-epidemic measures during the year had an impact on attendance at regular film screenings and on the number of university events held at the **Scala cinema**. The number of visitors to non-film events started to grow again at the beginning of the autumn semester. One of the large events was the **DVTV Pre-election Roadshow**. An important MU event was a two-day **cycle entitled Brno-Minsk**, which on 16th November reflected the 80th anniversary of the transport of Jews from Brno to Minsk, and on 17th November focused on the crisis of democracy and freedom in contemporary Belarus.

The involuntary closure of the University Cinema Scala was used to perform a long-planned renovation: all 475 seats and the flooring in the auditorium were replaced. The renovation was financed from the MU budget, donations within the project *Donate to Scala*, and from the Czech Film Fund grant. The MU brand was promoted thanks to visual features installed in the foyer and on the façade at the entrance from Moravské Square.

Gregor Johann Mendel's legacy has been cared for by the **Mendel Museum of Masaryk University** since 2007 in the authentic setting of the Augustinian Abbey in Old Brno, where Mendel lived and worked. In spite of the coronavirus pandemic (the museum was closed until 31 May), a number of **exhibitions and educational events** enhancing learning and culture in the region were held in 2021.

Mendel Museum participated in the organization of the **Masaryk Days** in March, the main topic of which was **Masaryk and the Others**. The museum hosted only two **Mendel Lectures** in 2021. The rest were cancelled due to the pandemic.

The *Interreg* project offered a new learning programme for children of lower secondary schools both in Czech and German, entitled **Gregor Johann Mendel – the Story of a Modest Genius**. So far, students have tried the project in Zwentendorf, Austria, and Břeclav.

The traditional **Mendel Days** commemorating the great scientist were held in November. The 2021 Mendel Days could be referred to as ground-breaking thanks to the recent thorough research of Mendel's DNA, the results of which were presented at a press conference attended by Czech and international media.

The annual summer festival on the occasion of **Mendel's birthday** was held in 2021 too. The Mendel Museum prepared specialized lectures and guided tours for the general public. As part of the festival, the exhibition *G. J. Mendel and GENETICS* in the form of comic strips was opened. The travelling exhibition was later displayed at the University Centre Telč.

The **University Centre Telč** has been located in the reconstructed premises of a former Jesuit college since 2011. The centre provides educational, cultural and social opportunities in the Vysočina Region. In 2021, the centre hosted **95 events** and accommodated 1,000 guests.

The **University of the Third Age**, celebrating 15 years since the commencement of teaching in Telč, organized an online **Workshop Scola Telcz**, which dealt with the digital image of Telč. The University Centre Telč took part in the **Researchers' Night** with a lecture *Above-ground archaeology: searching for the imprints of time inside the Jesuit college in Telč*. The successful summer exhibition *Painters Míla Doleželová and Jiří Mareš Coming Back to Telč!* brought to mind exceptional Telč artists and a unique collection of their paintings.

Thanks to **Munipress**, Masaryk University became one of the leading scientific publishers. Munipress succeeded both in the Scopus and Web of Science ratings and sent 398 publications for indexing.

The 2021 output contains 160 scientific works, 68 teaching or learning texts, and 58 journals. The publishing house prepared the new version of Open Journals System for the editorial environment of scholarly journals. The most important act of the year was the publishing of a four-volume facsimile of **Karel Engliš's** manuscript **Velká logika: Věda o myšlenkovém řádu** (*The Great Logic: The Science of the Order of Thought*). Eight books were nominated for major awards.

The scope of the published works was markedly affected by the COVID-19 pandemic. The publishing plan was not entirely met: 97 books remained in progress and 11 were withdrawn. Online shopping and booksellers' networks became of greater importance and sales grew by 14% compared with 2020. Munipress put a greater emphasis on the creation of video books, built its own recording studio and published over 30 videos. The publishing house made videos on Karel Engliš and his relationship to Tomáš Garrigue Masaryk on the occasion of the Masaryk Days.

The work of the **MU Archives** was substantially affected by the epidemic. The archives were closed to the public in the first half of 2021, which resulted in a decrease in the standard numbers of researchers' visits (43 researchers paid 84 visits). Standard operation was resumed in the latter half of the calendar year, when the processing of archival materials and searches for interested members of the general public were carried out and various confirmations and duplicates for university graduates were issued.

In July 2021, a book scanner for A1+ format was purchased for the MU Archives and digitization commenced. In October, the archives were inspected by the Archives Administration of the Ministry of the Interior for the maintenance of the National Archival Heritage records. The archives were a part of the Masaryk Days in March and contributed to the Brno-Minsk 1941-2021 exhibition. Archival materials of an official nature and the estates of university notables also continued to be acquired.

MU Rector Martin Bareš delivered a salutation on the occasion of the **102nd anniversary of Masaryk University** on 28 January. A unique musical programme was performed by the **Indigo String Quartet**.

The online conference **Science for Society** was held in May. The conference was attended by experts, scientists and managers who have contributed significantly to the containment of the pandemic with medical, research or societal expertise.

3 . 9

Library Services and Information Resources

The academic festival **Dies academicus 2021** together with the MU Rector's Awards took place online due to the unfavourable epidemic situation. On 10 June, the speech of Rector Martin Bareš was live-streamed on the university website. Jiří Hanuš, the Vice-rector for Academic Affairs, introduced the awardees, who received their prizes individually.

On the occasion of the **new academic year opening ceremony**, which took place in the Chapterhouse of the Augustinian Abbey in Brno, the Rector handed out the Rector's Award for Outstanding Teachers, MU Bronze Medals and MU Silver Medals.

The anniversary of the independent Czechoslovak Republic was commemorated by members of the MU senior management and faculty deans at the Medicinal Herbs Centre of MU.

November events of 1939 were remembered at the **commemoration ceremony at the Kounic Halls of Residence** memorial. Rector Martin Bareš and representatives of the faculties laid wreaths at the memorial in honour of the imprisoned, tortured and executed members of the Masaryk University academic community and other victims of the Nazi regime.

At the end of the year, an exhibition **Brno-Minsk 1941-2021** took place in Žerotínovo Square, the aim of which was to publicize the names of Jewish transport victims from the ranks of Masaryk University students and alumni. A screening of the documentary cycle *Forgotten Transports* and the war drama *Come and See*, and a debate on the topic of the Holocaust took place at the Scala cinema.

The university sports were affected by the 2021 pandemic as well. Despite this, MU students took part in the **University Eights** race and a **hockey rematch** with Mendel University.

Due to the anti-epidemic measures, online access to information grew in importance. The system of **e-prezenčka** was increasingly popular: **9,800 unique users** made 146 thousand loans and displayed 4 million pages of text. MU libraries extended their online selection of books on offer with **2,200 newly digitized books**. They joined the university-wide initiative of lending IT devices (laptops, tablets, earphones and web cameras) to students in need.

An essential part of the library services is the **electronic information resources**. The libraries in cooperation with the academic community made a selection of key electronic information resources (EIR) for 2022, when the existing contracts within the CzechElib consortium will expire. Four new resources were added to the EIR portfolio, including SciVal.

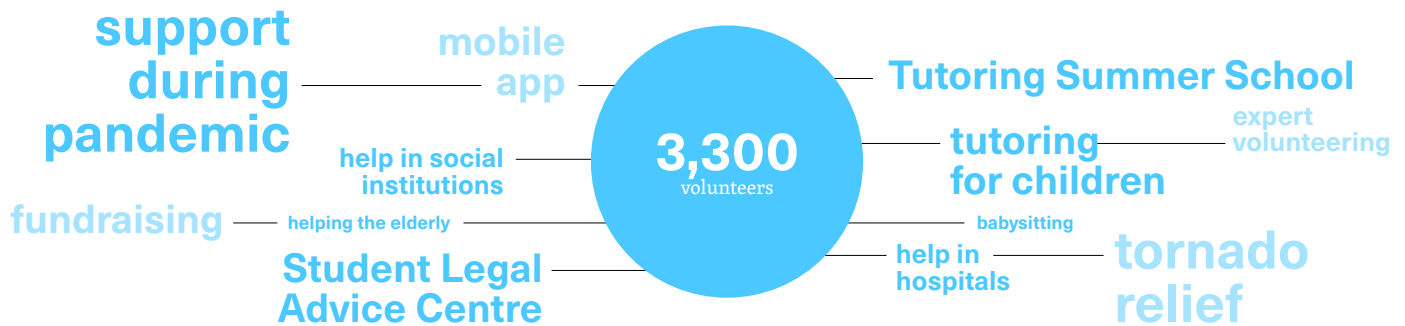
The libraries actively participated in the preparation of the **MU Open Science Strategy for 2022-2028**. The document defines 24 strategic goals concerning open access to publications and research data. It strives to ensure that open science principles become an integral part of the research process and service infrastructure at MU at a level comparable to the world's leading research organizations. The libraries employ OS methodologists, who provide first-level support to research teams and authors of scholarly publications.

Following the growth of the university, the libraries also started to provide services for the new constituent parts of MU: the library of the University Campus Bohunice, which assumed services for the new Faculty of Pharmacy, was joined by the Central Library of the Faculty of Arts, which has taken care of the Mendel Museum library. The long-term experience of the libraries with digitization and building digital libraries was utilized during the cooperation with the MU Archives in the project of digitization and opening historical archives.

A number of library events were held in 2021, of which the **Library Academy for Managers**, organized by the FSS or the new **Makerspace** study room to support creativity at the FA can be mentioned.

The **Teiresiás Centre** has its own library that complements the faculty collections. The centre's library holdings include **1,773 items in Braille**, and the total number of adapted titles accessible electronically is 7,850 including a hybrid book format developed by Masaryk University. Work with these collections is possible thanks to the *Daleth* catalogue, designed by the Teiresiás Centre. This enables students with special needs from other HE institutions to use the centre's library.

Volunteering through MUNI HELPS in 2021



Publications and libraries in 2021

1,632

publications in total available in the Munispace online reading room

160

scientific publications issued by the Munipress publishing house

1,577,625

of publications available in the MU library fund

79,991

visits to the online reading room Munispace

58

issues of academic and scientific journals published by MU

1,773

library units in Braille

19,148

registered users actively using MU libraries

Topics of the most read articles in online Magazine M in the Science & Research section in 2021

MU survey on wearing respirators in shops

Jiří Mayer on vaccination: The mRNA vaccine is an ingenious bodyguard

MU archaeologists reveal the oldest writing system used among Slavs

MU seeks volunteers for research on online gaming behaviour

MU sociologists reveal COVID vaccination paradox

Psychologists surveyed views on vaccination

Anthropologists seek volunteers to examine the body structure of Central Europeans

Interview with historian of religion David Zbiral about how religion works

Science for Society conference: Science helps defeat coronavirus

Most visited MU events in 2021

Science slam 12

A popular science competition for students, academics and the general public. The 2021 competition was held online through video speeches on the topic of genetics. The videos got more than 53 thousand views.

Researchers' Night

A nation-wide event popularizing science. The 2021 programme focused on the theme of time. Videos and podcasts from different scientific perspectives could be watched online and got 7,196 views.

MU vs. MENDELU ice hockey match

The traditional sports event after a year's break. MU won 4:2. The game was attended by 3,600 fans from MU and the general public.

Open Day

A special open day presenting degree programmes and university life to prospective students. The 2021 event was held online and attended by 2,700 applicants.

Science for Society

An online conference organized by MU, discussing the university's role in addressing health and social issues of the coronavirus crisis. The online programme got 1,454 views.

Honorary Doctorate conferred by MU in 2021

Martina Hartmann

President of Monumenta Germaniae Historica (MGH), Germany

Silver Medals awarded by MU in 2021

prof. PhDr. Josef Jařab, CSc.

internationally recognized literary scholar, American Studies expert, and translator, who has greatly contributed to friendly relationship between Palacký University Olomouc and MU

doc. PhDr. řárka Porteřová, Ph.D.

winner of the Rector's Award for Long-term Excellence in Research in social sciences and humanities

prof. MUDr. Irena Rektorová, Ph.D.

winner of the Rector's Award for Long-term Excellence in Research in natural sciences and medicine

4

Personnel Management and Employee Development

- 4 . 1 University-wide and Faculty-level Personnel Policy Measures
- 4 . 2 Support for Creative Activities and Professional Development
- 4 . 3 University Awards Granted
- 4 . 4 Pedagogical Competence Development
- 4 . 5 Employee Training
- 4 . 6 Care for Employees
- 4 . 7 Ethics and Equal Opportunities



NINE FACULTIES AND TWO INSTITUTES AT MU ARE PROUD HOLDERS OF THE HR AWARD

Masaryk University endorses the principles embedded in the European Charter for Researchers. The HR Award, awarded by the European Commission, has now been obtained by as many as nine MU faculties, the Institute of Computer Science, and the CEITEC, which together with the Faculty of Science has already passed the first reassessment after two years from the certification. The HR Award is considered an international quality standard in the management and development of R&D staff. The Faculty of Pharmacy has also officially endorsed the HR Award principles in February 2021. Once it has won the certification, a transparent and motivating work environment for researchers will be guaranteed at the whole of Masaryk University.

4 . 1 University-wide and Faculty-level Personnel Policy Measures

The most important goal for the university in personnel policy is to **obtain and maintain the HR Award** for all its constituent parts. In the course of 2021, the HR Award was won by the FA, FMed, FEdu, FEA, FI, FSS, FLaw, FSpS, and also the ICS. The FSci and the CEITEC MU have passed the first reassessment following the award of the certification two years ago. The granted award is the starting point for the subsequent implementation of all the prepared plans. In 2021, changes in connection with the HR Award were commenced in the following areas: the Regulations on Competitive Selection Procedures, the Code of Ethics, functional jobs definitions, employee development and training strategy, and the new employees' adaptation process. A key university-wide topic of 2021 was the **Gender Equality Plan (GEP)**, which was published at the end of 2021. Prior to its publication, extensive internal audits were carried out at all faculties, bringing dozens of incentives.

The **FSS** has cultivated its internal environment by the **newly introduced feedback system**. In this system, academic and administrative staff **evaluated their managers anonymously** (just like when students evaluate their teachers in course opinion polls). Employees had the opportunity to say what they appreciated about their managers, what changes they recommended, or what they saw as a problem. The entire process finished with interviews between the Dean and the department heads and interviews between the bursar and the heads of the Dean's Office workplaces.

At the **FSci** in 2021, the pilot phase of the individual performance evaluation took place (for 2020), with the use of the university EVAK application. The faculty has strengthened the **transparency of determining the variable salary component** as part of the HR Award project. Based on the experience gained during the pilot evaluation phase, a methodology was developed (linking the individual evaluation result to the personal compensation percentage) which is being progressively introduced at the individual faculty workplaces.

The **FLaw** has also put into practice an **academic staff evaluation** procedure, when employees are evaluated in the areas of pedagogy, science (publications, projects), as well as in other activities (**university's social role**, organization of workshops and conferences).

The **FEA**, aiming to have at least one international worker with a long-term contract at each department, is implementing a **scheme to facilitate the funding of international staff salaries**, through which it grants subsidies to departments to co-finance the salaries of these staff.

To **facilitate internal communication**, the **FMed** issued a *Guide for Department Heads*, containing important information on the agendas of the individual Dean's Office workplaces and faculty processes. In connection with the preparation of a new careers system, an analysis of the career path system at selected universities abroad was carried out. The FMed Personnel Office has also defined the **new employees' adaptation process**.

4 . 2 Support for Creative Activities and Professional Development

Faculties support the creative activities of their academic staff through individual faculty programmes. This effort is facilitated by institutional support funds and other faculty funds, which support the building of scientific teams, habilitation and professorial appointment procedures in various stages of preparation, publishing scientific journals and internationalization of publishing activities.

The FEA annually announces the **Programme for the Support of Career Growth** for academics who intend to apply for habilitation or professorship. The funding enables successful applicants to cover costs related to the fulfilment of qualification requirements and to finalize the proposal for the initiation of the habilitation procedure or the professorial appointment procedure. Academics, researchers and doctoral students have the opportunity to benefit from the **programme to support the publication of scholarly articles in scientific journals**. Successful applicants can use the funds to cover the costs of translation, proofreading or the review procedure.

Another major form of supporting creative activities is the sabbatical leave. At the **FSS**, it was granted to seven employees in 2021. In addition, three placements abroad under the **Fulbright Scholarship** programme were commenced at the faculty.

The FEdu announced a selection procedure for applicants for a **contribution towards an internship abroad**, for the preparation of habilitation and appointment procedures, and for a subsidy to cover the costs of a workplace to keep it running during the absence of these persons.

The academic staff at the FLaw are **remunerated for Q1 and Q2 publications** or for outstanding foreign-language monographs. The FSci has also implemented specific research and support rules at its departments. Academics are most often remunerated in the form of graduated **bonuses** motivating them to publish **in top international journals**, i.e. in the Top 1%, 10% and Q1 of ISI Web of Knowledge.

At the FMed, the key support scheme is the FMed Internal Grant Agency, which aims to improve the quality, prestige and, above all, the internationalization of research at the faculty. The support is divided into Start-up grants, Postdoc grants or **FMed Accelerate grants**. In 2021, the resources from the faculty fund were also used to support successful publications of authors in Q1 and Q2 of the Web of Science.

The CEITEC MU emphasizes in its support schemes the support of **professional development of junior researchers** such as doctoral students and postdoctoral staff. It also offers its employees and PhD students a wide range of educational programmes and courses. The courses cover diverse areas of professional development, from management and leadership, time-management, communication and assertiveness courses, project management, research funding, scientific communication, to academic writing, and data analysis.

4 . 3 University Awards Granted

On 10 June 2021, on the occasion of Dies Academicus, which took place in the form of online speeches due to the pandemic, as usual the Rector of Masaryk University Martin Bareš handed out the Rector's Awards for outstanding achievements in science and research, education, art and civic pursuits.

The **Award for Outstanding Creative Activity** was won by Dalibor Blažej from MU's Central European Institute of Technology, who leads a research group at CEITEC MU focusing on hereditary disorders and transcriptional regulation.

The **Award for Outstanding Artistic Activity** was given to Petr Kamenický from the FEdu, who is the founder and curator of several galleries at Masaryk University. Each year, he participates in the preparation of a number of exhibitions, whereby he contributes to developing arts at MU and helps cultivate the university environment.

The **Award for Extraordinary International Grant Competition Results** went to David Kosař from the FLaw. He is the principal investigator of the ERC Consolidator project INFINITY, which deals with the role of informal relations between judges and political actors within the judiciary and their positive or negative impact on the judicial system in a given country.

The **Award for Outstanding Research Results Achieved by Young Scientists under 35** was received by Martina Kosinová from the Anaesthesiology, Intensive Medicine and Pain Management programme at the FMed, whose specialisation in the anaesthesiology of vulnerable groups, primarily children, parturient women and other high-risk patients with other illnesses, makes her an important figure in her field. Also awarded was Alena Macková from the FSS, a graduate of Political Science and Sociology, who regularly achieves exceptional research results and has extensive experience with working in and managing research teams. Last but not least, Dominika Tóthová, a graduate of Economic Policy and Administration at the FEA, is a successful researcher focusing on topics such as the environment with regard to air quality and municipal waste and recycling management.

The **Award for Long-term Excellence in Research** went to Irena Rektorová from CEITEC MU, an outstanding scientist with a long-standing interest primarily in Parkinson's and Alzheimer's disease, who, in cooperation with partners at international institutions, has built a school of cognitive-behavioural neurology. Another awardee is Šárka Portešová from the FSS, who is an expert in research oriented on gifted children, focusing on the development and validation of procedures for the identification of gifted children and further development of their talents. The third awardee in this category is Osvald Vašíček from the FEA, whose research activities contribute to the development of the Czech National Bank's core models used for macroeconomic forecasts.

The **Award for the Active Development of Civil Society** was given to Hana Válková from the FSS, who is one of the founders of Emil Open – the European Youth Games for the Disabled, which serve as an international athletic and social event for young people with disabilities.

The **Award for Volunteering** was received by Natália Antalová, Dominika Čekanová, Matyáš Fejfar, Martin Janků, Senad Kolář, Boris Lindtner, Veronika Koňářková, Zuzana Mikulenková, Barbora Nebenführová, Kristína Pečíková and Adam Wechsler – FMed students who were actively involved in the organisation of volunteer activities at the faculty in the early months of the COVID-19 pandemic in the spring of 2020. Other awardees in this category are Eliška Buršová, Kristýna Fialová, Tereza Kompauerová, Adéla Kubíčková, Alena Smetanová, and Lucie Zikmundová – FSS students who got involved in the operation of a new contact centre for homeless people established in Brno at the beginning of the COVID-19 pandemic. A third group of awardees includes Michal Radvan, Hana Čejková, Lucie Mrázková, and Marek Brada – a group of experts from the FLaw who became involved in helping the general public as the initiators, creators and coordinators of the MU Faculty of Law Student Legal Advice Centre during the first wave of the pandemic.

The **Award for Innovations in Teaching** was won by Marek Joukal, Lenka Vargová, Kateřina Vymazalová, and Lucie Kubíčková, a team of teachers from the Department of Anatomy at the MU Faculty of Medicine, which teaches anatomy. Other holders of the award are Petr Štourač, Lydie Izakovičová Hollá, and Jitka Blažková for the building of the FMed Simulation Centre, the most advanced workplace of its kind in Central Europe.

On the occasion of the new 2021/2022 academic year opening ceremony, which took place on 16 September 2021 on the premises of the Augustinian Abbey in Brno, the Rector handed out three **Awards for Outstanding Teachers**. The Rector's Award for Outstanding Teachers in **natural sciences and medicine** was received by Petr Liška from the FSci, who focuses on mathematical analysis. What students appreciate most about his lectures is his empathy, flexibility and human-centred approach, which helps them grasp even the more difficult and less popular areas of mathematics.

In **social sciences and humanities**, the award went to Irena Hůlková, a scholar of the English language at the FEdu, who specializes in phonology and phonetics. Students praise her human-centred and friendly approach, as well as her extensive knowledge and enthusiasm for teaching. In **economics and information science**, the award was given to Jan Böhm from the FSci and the FEA, who focuses on statistics, data mining, discrete deterministic models and financial models simulation. What students appreciate about his teaching style is in the first place the clarity with which he can elucidate complex calculations and situations.

Other Rector's Awards awarded to the best students in Master's and doctoral programmes are mentioned in chapters 1.8 and 2.7.

4 . 4 Pedagogical Competence Development

The improvement of pedagogical skills at Masaryk University is primarily the responsibility of the **MU Pedagogical Competence Development Centre - CERPEK**. Its activities in 2021 were influenced by the continuing pandemic, but thanks to the experience obtained during 2020 its impact was considerably mitigated and the centre was ready to operate online and to launch the remote learning mode.

For the first time in 2021, the semester-long educational programme **Pedagogical Competence Development Workshop** was open, which was intended both for teachers as well as doctoral students who partake in teaching. In practically oriented workshops, the attendees improved their pedagogical competencies and didactic knowledge and acquired valuable information for the creation of new and the innovation of existing courses.

In spring 2021, CERPEK also offered a series of **workshops** for the support of **the quality of remote teaching** at the university. In various workshops, the participants gained inspiration on how to mobilize students in online lessons, recommendations for the preparation of study materials and giving feedback. This included workshops such as *Building Strong Foundations for Successful Online Teaching from the Comfort of Your Home*, *Giving Effective and Interactive Online Lessons*, or *Discovering Innovative Ways of Assessing and Monitoring Student Progress*. The recordings of selected workshops are also published on an MS Stream channel.

In the course of the year, CERPEK went on expanding the courses on offer. A novelty in the webinars on offer was the **Journaling as a Teaching and Professional Development Method** course. It focused on the possibilities for the use of journaling as a teaching strategy by students in their development, for example for research, prioritization, or task management purposes. Another novelty was the one-of-a-kind webinar entitled **How to Care for Your Work Capacity and Satisfaction in Career Development**, built on elements of age management and the proven methods of Finnish experts.

In December 2021, CERPEK held the first **Talks on Teaching** with the topic *First moments of students at the university: Give them help, or let them learn to swim?* The meeting was open to all MU educators and lecturers to discuss issues they regularly encounter in their teaching practice.

Another significant event in which CERPEK was involved was the **TII MUNI** project (*Prospective Teachers' Training Improvement and Innovation at MUNI*). Within this project, the total of 21 seminars for university teachers **who train secondary-level teachers** at the FA, FEdu, FSci and FSpS were financed.

The last group of trainees successfully completed the **Development of Pedagogical Competencies for Academic Teachers** professional development programme, which was financed within the MUNI 4.0 project. In the last four years, this programme was completed by 121 MU employees.

4 . 5 Employee Training

In autumn 2021, a **new section was launched in the Employee Portal** where the **training courses** on offer are published. Here, MU employees can enrol in newly announced training courses or watch the recordings of past courses. The list includes universal training courses such as the Personal Data Protection and Processing course or the Office 365 Applications Training as well as specialized courses concerning financial control, records management, or information for managerial staff.

In 2021, the university granted its employees **more than 500 licences for SEDUO e-learning courses** and implemented another 35 individual soft skills courses.

In 2021, thanks to the educational activities of the Personnel Management Office at the Rector's Office a total of 970 MU employees were trained and an additional 140 employees received language training. In 2021, the **HR Academy** was open for the first time at MU, focusing primarily on employee recruitment. The training programmes for Dean's Offices secretarial staff and **managerial training for academic and non-academic managerial staff** were also redesigned. Within the HR4MU II project, faculty employees were given the opportunity to receive training focusing on personal development and interpersonal skills.

The **FEA** continued its active care for employees in the **Leadership from A to Z** development programme, supporting the development of managerial skills of the Dean's Office managerial staff.

Since May 2021, **FSpS** employees have had the opportunity to use an **educational allowance** of **4,000 CZK** per year. Within the HR Award project, 10 soft skills development courses intended particularly for academic and senior administrative staff and their deputies were implemented. The **FEdu** also offered a total of 30 educational courses for its employees, including **semester-long language courses**.

The **FI** provided training courses and support to its staff in the area of online communication. Aside from the usual benefits, the faculty offers its employees the **use of various licensed software**.

The **FLaw** academic staff participated in the **Development Programme for Senior Academic Staff** organized by the Motiv P personnel and consultancy firm. Non-academic managers participated in a key **leadership** skills development programme. As regards language skills development, employees are offered a *Legal English* course.

4 . 6 Care for Employees

Support services for international employees at Masaryk University are procured by the **International Staff Office (ISO)**, which provided **1,700 consultations** to these employees and their families in 2021. The traditional introductory meetings with international employees were mostly held remotely, with a view to the pandemic. Accompanying these employees to offices continued to be a standard service. The ISO continually updated them on the applicable anti-epidemic measures and on residential and practical matters. The planned cultural and historical field trips and other informal meetings of international students across MU could not take place due to the pandemic.

Collaboration among the Brno-based higher education institutions continued at the **meetings of the representatives of the Welcome Office (MU, VUT, MENDELU, and EURAXESS)**. With the participation of MU, another meeting of the Brno-based information platform within the *Strategy for the Integration of Foreign Nationals in the City of Brno (2020–2026)* and the regional platform of the partners involved in the integration of foreigners in the South Moravian Region took place. The ISO also partnered with the Brno Mayor's Office in the preparation of the first **Meet the Mayor meeting between the municipal government and the researchers from Brno institutions**.

Also in 2021, there were **persons with various types of disabilities** working as university teachers and specialists. Support to these persons is provided by the **Teiresiás Centre** at an extent similar to the services for disadvantaged students. These services include in particular the publication of tactile literature, tactile graphics and maps, a video studio for recording documents in Czech sign language, and the creation of electronic documents with the necessary texts and subtitles for live videoconferences and pre-recorded video documents.

According to the records of the **Teiresiás Centre**, in 2021 there were in total four people who are blind or have a severe visual impairment, 12 who are deaf or have a severe hearing impairment, and three wheelchair users among the MU employees. The centre is also involved in organizing and opening selection procedures for applicants with special needs and gives methodological support to the personnel departments of faculties and other workplaces as regards the employment of persons with disabilities.

Since 2021, all university employees have been offered the option to use the **MultiSport card**. A meal allowance was provided in the form of a cash allowance to MU employees, who can use the services of the MU canteens. The university also offers a **supplementary pension insurance contribution** and a complementary **pension savings scheme**, free **vaccination** against tick-borne encephalitis, and the possibility to use various **software licences**.

The **child-care centre near the MU Campus**, established in collaboration with Elánek, a private provider of child-care centres, completed its first year of operation. For its employees, the child-care centre offers a concessionary fee – for MU employees the price for the placement of a child is one-third of the standard amount.

4 . 7 Ethics and Equal Opportunities

The **MU Equal Opportunities Panel** is an advisory body to the Rector which has been active at the university since 2016, particularly within the issues of gender equality and non-discrimination. In 2021, its members included Simona Koryčánková (Vice-rector, Chair of the Panel), Zuzana Derflerová Brázdová, Vladimír Hyánek, Jana Chamonikolasová, Vladimír Jůva, Petr Klán, and Kateřina Nedbálková. In 2021, the panel handled one complaint.

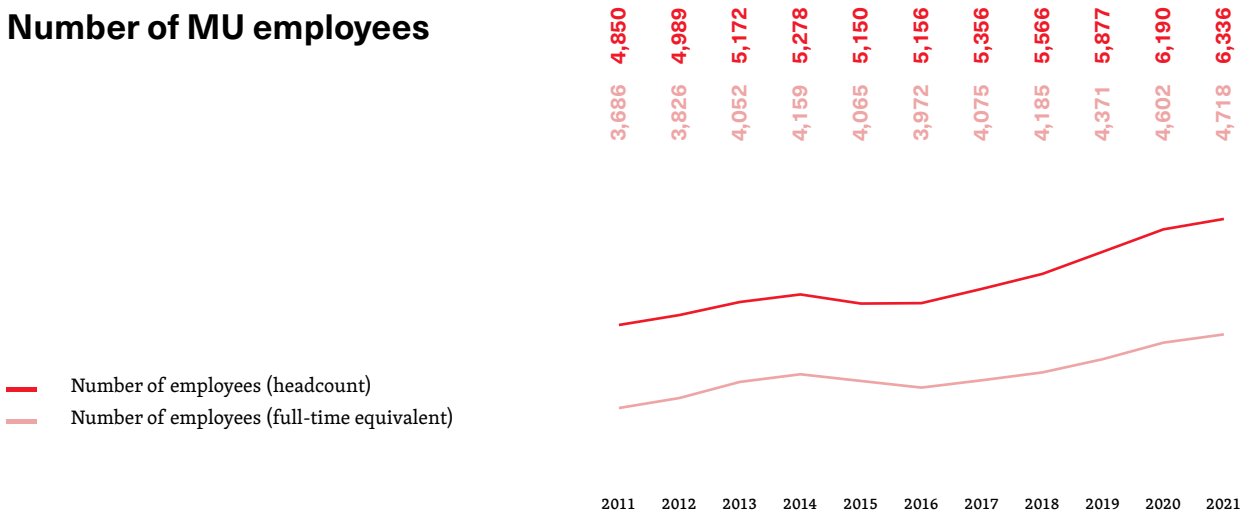
The **MU Ethics Board** did not receive any complaints in 2021. The MUEB composition was the following: Naděžda Rozehnalová (Chair), Josef Bejček, Ladislav Blažek, Zuzana Derflerová Brázdová, Mojmír Křetínský, Vladislav Mužík, Marie Nováková, and Eduard Schmidt.

The **MU Research Ethics Committee (REC)** oversees the application and observance of the relevant ethical standards in research. This especially concerns compliance with ethical standards in research with a human element, including work with biological material of human origin, at all faculties with the exception of the Faculty of Medicine. The FMed has its own ethics committee for these purposes. In 2021, the MU REC assessed a total of **176 projects**, which included 123 new proposals. The remaining work consisted of reviewing existing projects, project inspection after the award of funds and consultation on future projects and projects with unclear ethical relevance. Several online discussions concerning topical issues in research ethics were held in 2021 (personal data protection in research, research on historical figures and collection of research data through external agencies).

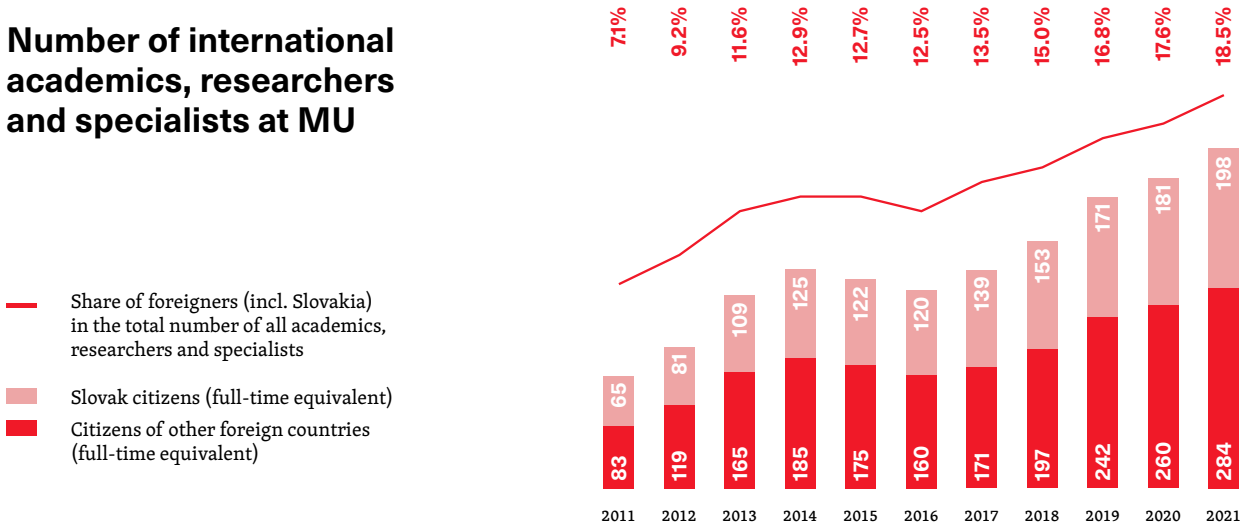
Some members of the MU Research Ethics Committee are actively involved in the **INSURE: Interdisciplinary Support of Research Ethics** project. REC Chair Renata Veselská leads the **Research Ethics and Integrity** working group in the **A4L_ACTIONS** international project.

In the course of 2021, a **gender audit** was performed at individual faculties as part of the **HR Award Action Plan**, in which faculties committed to support a gender-balanced environment. The audit focused on organisational culture transformation, work-life balance, employee recruitment and selection, gender balance in leadership and measures against sexual harassment and other forms of violence. The findings summarized in the gender audit final report were backed by content analysis of documents and statistical analysis of data. The audit was carried out internally in collaboration with the National Contact Centre for Gender and Science (NKC). Faculties also took on board the adoption of the **Gender Equality Plan 2021–2024**, which follows the EU gender equality objectives and also the MEYS Gender Equality Promotion Plan.

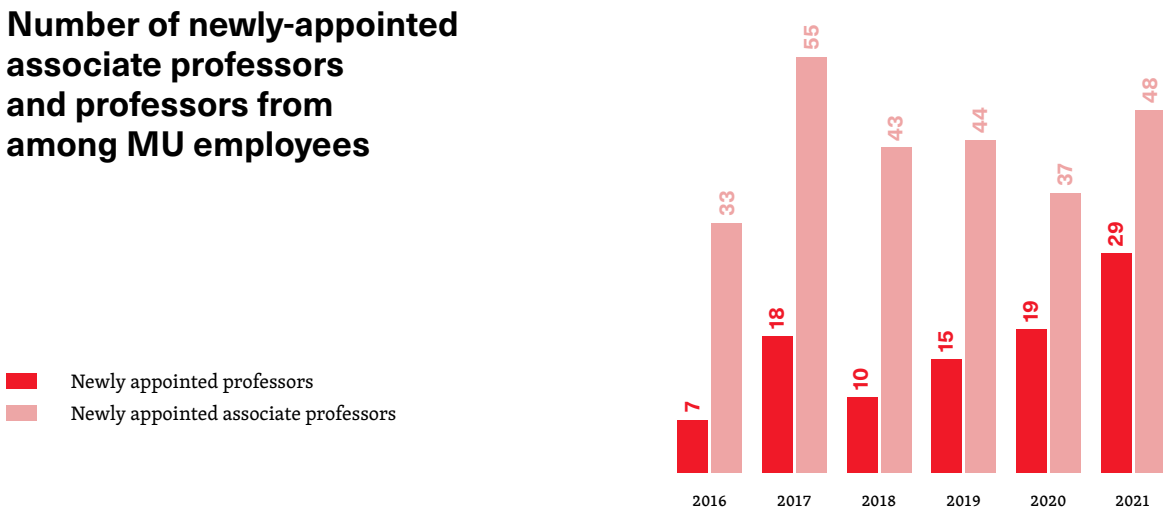
Number of MU employees



Number of international academics, researchers and specialists at MU

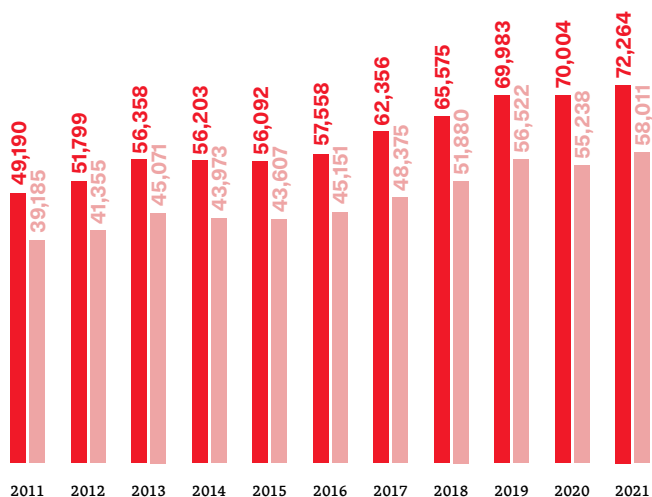


Number of newly-appointed associate professors and professors from among MU employees



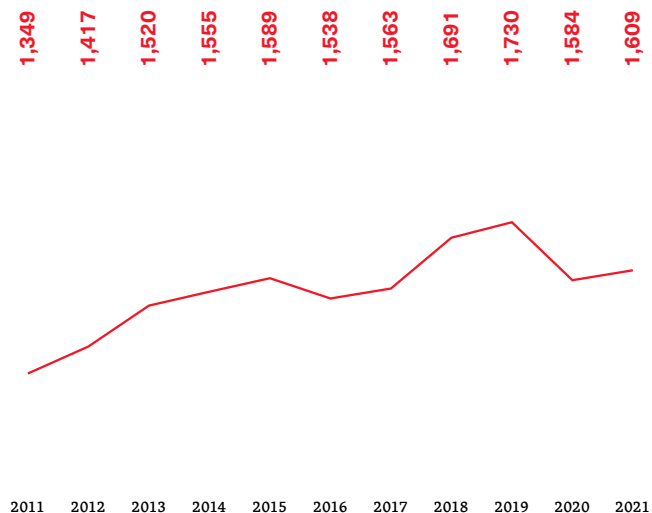
Mean and median wages of academic staff at MU

■ Mean wage in CZK
■ Median wage in CZK

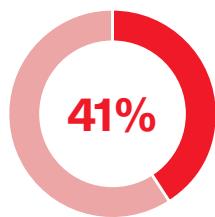


Total non-investment revenues per MU employee

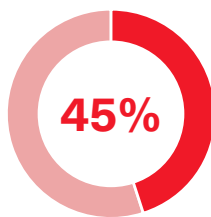
— Non-investment revenues in thousands CZK per MU employee



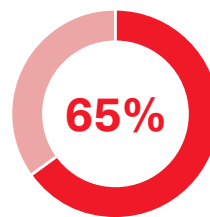
Representation of women among MU employees



Academic staff



Research and specialist staff

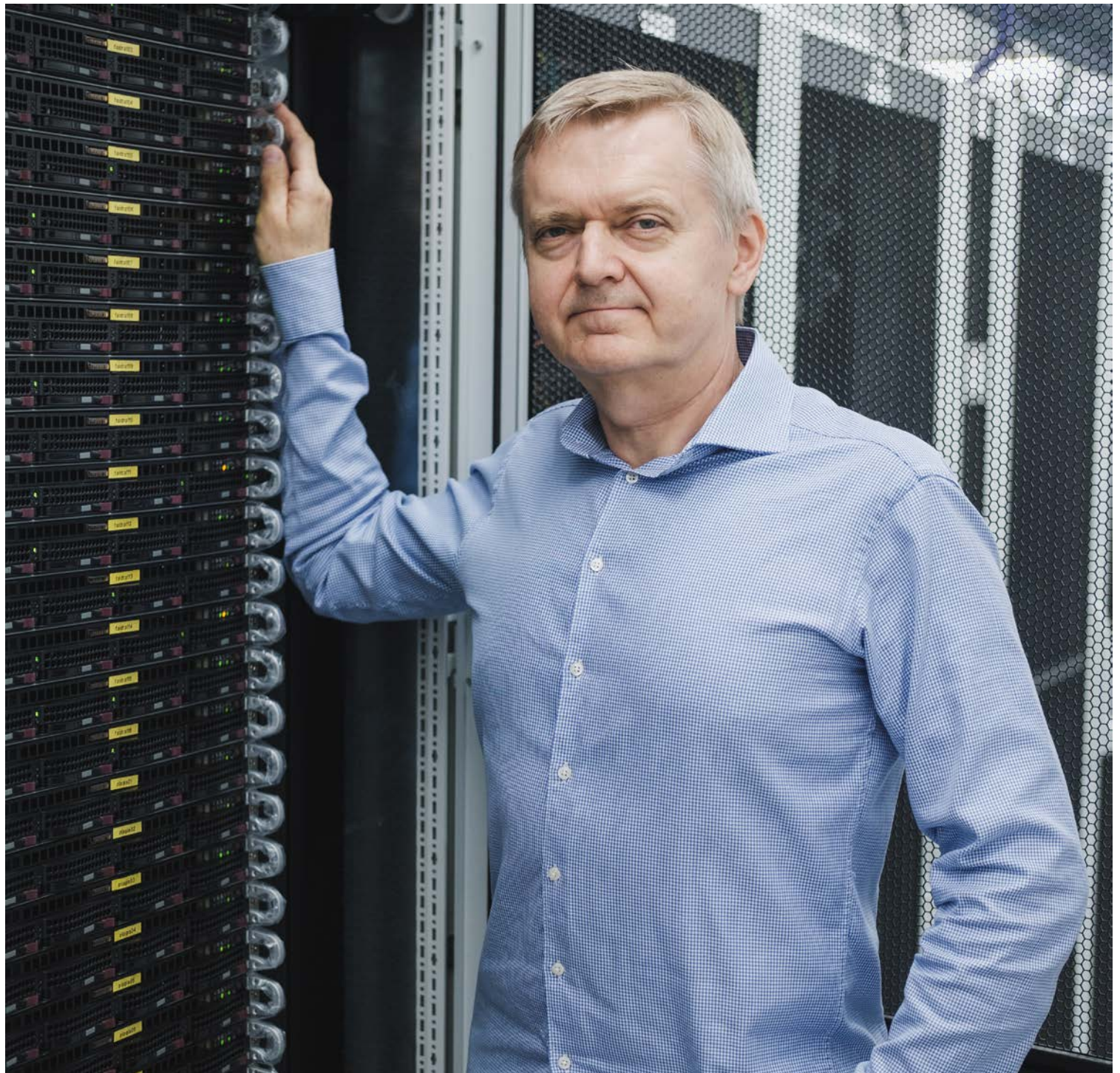


Other employees

5

Information Systems and IT Support

- 5 . 1 Significant IT Innovations at MU
- 5 . 2 Development of MU Information System
- 5 . 3 Learning Management Systems and Teaching Support
- 5 . 4 IT Infrastructure and Cybersecurity



MASARYK UNIVERSITY NOW ISSUES ELECTRONIC DIPLOMAS AND ALLOWS REMOTE ENROLMENT FOR STUDIES

Masaryk University continued to significantly develop its student services and in June 2021 began to issue diplomas in electronic form. By issuing electronic diplomas, MU confirms its leading position in digitalisation among Czech and European universities. After finishing their studies, each MU graduate will receive in addition to the paper original an electronic form of the diploma secured by authentication features. An electronic diploma makes proving qualifications in the Czech Republic and abroad more convenient. As a follow-up to the online admissions procedure, the university also enabled remote enrolment for studies for the first time in 2021, due to the COVID-19 pandemic. To enrol remotely, prospective first-year students were able to use new options in online identification.

Photo: Michal Brandejs, head of the Computer Systems Unit of the Faculty of Informatics, which develops the MU Information System and takes care of computerization of study-related administration

5.1 Significant IT Innovations at MU

The year 2021 also brought difficult challenges in IT. The university successfully coped with modification requirements to the IT systems and a significant increase in data traffic induced by the COVID-19 pandemic. It also continued **discussing and building the unified MU enterprise architecture** and preparing for the generational renewal of the MU economic and management system. In 2021, a number of development activities were completed and the **Faculty of Pharmacy was finally integrated** in the university systems and processes.

In response to the pandemic and the measures adopted at the university, the **COVID-19 Prevention application was developed**. At the beginning of the year, the development focused on the support of employee testing at the university. With the launch of vaccination in the Czech Republic, the development of the application was reoriented towards the support of employee vaccination and creation of reports for the university management and insurance companies. Thus, the application became a **key factor for decision-making on the pandemic measures** at Masaryk University in 2021.

During 2021, the activities linked to the building of the unified enterprise IT architecture involved in particular the introduction of a **system of prioritization of requests for the main IT systems** (IS and INET). The first prioritization of administrative and economic requests (primarily in the INET system) took place in January 2021. At the end of 2021, another round of prioritization of requests, with estimated completion in 2022, was launched. In the course of the year, the IS requests prioritization system was also launched.

In 2021, Masaryk University announced a **selection procedure for a new generation of its economic and personnel system** (EPIS). Aside from finding a modern solution for economic and personnel agendas, the main motivation is to build a unified platform for integrating additional information systems, such as reporting, GMR, an e-shop and others. In 2021, a team composed of representatives of the ICS, the Rector's Office and the faculties kick-started a competitive dialogue. In the first round of the negotiations, the team made themselves familiar with the parameters of the solutions proposed by the bidders in the selection procedure.

There were also a number of other development activities of varying scale which were given attention. A major activity was the definition of the main **MU services sales support** objectives. Developments were made in the **Employee Portal**, the target architecture and the individual modules (directories, main menu, search, newsletters, etc.) were defined and the new design was launched for some pilot faculties.

A new agenda for the **preparation of innominate contracts** was added in 2021. It covers the entire life cycle and is linked to the economic system and records management. A **cash allowance in place of meal vouchers** was also introduced and digitisation of travel orders implemented.

5.2 Development of MU Information System

The Computer Systems Unit of the FI provides for the administration of university studies via the **Masaryk University Information System** (IS MU). The system encompasses administrative and communication services, electronic support for teaching and courses for the public, research and development services, a community network, the internet *Shopping Centre*, a repository of qualification theses and publications and the *Document Office* for electronic administration of official acts, including records management and a register of contracts.

In 2021, the development of the IS MU focused primarily on ensuring additional study and administrative processes **remotely**, because of the COVID-19 pandemic.

For first-year students, the **remote online enrolment** function was launched, using new options in online identification via the *identitaobcana.cz* portal or a video interview directly in the IS MU. In the **E-transcripts** application, students may now conveniently create electronically sealed transcripts of records (grades or completed courses syllabi). Another new function is the issue of an **E-diploma**, an electronic form of the diploma secured by authentication features which each student will receive after finishing their studies, in addition to the paper original.

E-learning tools were adapted so that the **Learning Potential Tests** could take place online. The **Tudle** application for voting on meeting dates or other content was created and the development of the **Practical Training** application continued.

In the **Document Office**, the pilot phase of the digitization of closed and new student files was launched, involving authorized conversion of the files into electronic form and their time stamping. The Document Office also facilitated the digitisation of other areas, such as IT loans to students. In 2021, **153,931 electronic documents** in 1,803 agendas were signed directly in the IS MU and 2,906 contracts were inserted into the *Internal Register of Contracts*. The **Shopping Centre** handled **108,612 purchase orders** for 76,675 customers in 2021. A new method of selling services internationally was introduced.

Tools such the *Survey*, the *Study Planner* and the *EVAK* academic staff evaluation application were converted into a new **responsive design**. Significant developments were made in the system of **hybrid** meetings of collective bodies, which now include the meeting's agenda, administration of attendees, online conversations, video conversations, voting and elections. The intensive development of personnel tasks materialized in the *Non-academic Employee Evaluation* application.

In the IS MU and the **Theses.cz** and **Odevzdej.cz** plagiarism detection systems a new similarity detection algorithm was deployed, which better detects textual matches. In 2021, the IS MU development team led a centralized project entitled *Technical Development of Administrative Study Tasks and Use of Their Essential Role for Digitization of Universities* for 26 public higher education institutions in the Czech Republic.

5 . 3 Learning Management Systems and Teaching Support

Electronic support for teaching is a primary component of the Masaryk University Information System. In 2021, due to the unfavourable epidemic situation, the development focused primarily on **e-learning applications** to make remote teaching more convenient for teachers as well as students. Great developments were made in the *ROPOT* application, which allowed for the **Learning Potential Test** (the entrance examination) to take place completely in the **remote online mode**. The new functions include adaptive testing support, monitoring responder activities, additional *ROPOT* setting options and a new *Response Status* application. The *ROPOT* application was also used for the Geographical Olympiad for primary and secondary schools, thanks to which over 5,000 participants were introduced to the IS MU environment.

In the **Online Teaching** application, the option for teachers to make **video recordings of lectures** was added. The *Student Teaching Practice* agenda focused in particular on the administration of practical training opportunities for prospective teachers and was deployed for real-time use at other faculties. In the *Peer Assessment* application, support was added for file distribution and multimedia player functions.

The directory of available e-courses was given a new design and the **11th year of the Open Space Conference on E-learning IS MU** took place in the e-course environment, this time fully online. The MU E-learning portal (*Elportál*) published a number of articles on citation practice, intellectual property law and the requirements of students with special needs in the classroom. The IS MU support team gave users a number of consultations by electronic means or phone for easier handling of the epidemic.

The priority of the Institute of Computer Science in 2021 was to support the operation and new development of the functionalities of the **Microsoft 365** platform, which is used primarily for synchronous teaching at the university. The platform is fully accessible for each university student and employee to use. Following the adaptation of the Microsoft Teams tools, which are actively used by 30, 800 users as a solution for hybrid lectures and examinations, the university focused on the implementation of additional task management tools and the **PowerBI** platform for the presentation of university data.

To enhance active IT support, the Institute of Computer Science launched an **online communication platform** (chat) to immediately connect university users with the IT ServiceDesk for faster handling of requests and issues. Another auxiliary measure was the automation of the university call centre.

With the use of its cloud infrastructure, which Masaryk University has been developing for a long time now, **virtual classrooms and experimental research environments** were added to the computer facilities and labs which are primarily intended for synchronous teaching. These environments facilitate the teaching and research practice at MU, while offering a solution for asynchronous teaching during the pandemic.

5 . 4 IT Infrastructure and Cybersecurity

The vast network of services and systems at Masaryk University requires a robust and high-performance communication infrastructure, which can handle challenges coming along with the general online teaching mode or requirements for fast transmission of large volumes of scientific data.

In 2021, at all MU faculties distribution network components were modernized, which will enable the backbone transmission capacity to be increased up to 100 gigabits per second and further expansion of the successful **Virtual Server Rooms** concept. In 2021, the capacities of the centrally provided **MUNI Cloud** infrastructure were considerably increased.

MU researchers have access to a vast computing and storage infrastructure via the **CERIT-SC centre**, which provides technical support for extreme calculations and e-infrastructures for more than 2,600 users. In 2021, the **Kubernetes** infrastructure was made available in the pilot phase and also the **MU Sensitive-Cloud** infrastructure, intended for processing of sensitive data, was further developed and deployed for pilot operation.

Secure handling of data was also enhanced in 2021 with the development of the **RemSig service**, providing for the full central management of private keys and certificates for signatures and other forms of confirmations in the university's internal systems. Last year, the service managed 122 personal qualified certificates and created 90,000 qualified signatures and 13 qualified seals.

The MUNI Unified Login System was used by more than 7,000 users daily. To achieve an even higher level of security, the **multi-factor user authentication** support was developed, giving users the option to confirm their login through a secondary authentication mechanism.

Cybersecurity at Masaryk University is ensured by the internationally certified CSIRT-MU cybersecurity team, who handled over 147 thousand attempted attacks at MU in 2021: 142 attempts originated in the MU network and over **1,380 cases were** classified as a **cybersecurity incident**.

At the international level, the **CSIRT-MU** is involved in **three H2020 project consortia** and also collaborates on NATO research and with US university partners. At the national level, its central area of focus is security research projects of Czech institutions (such as the Ministry of Interior, NCISA or NAKIT), which also includes the MEYS project for *Increasing the Level of Cybersecurity at Public Universities*. Within the *Cyber and Information Security Research and Development Platform*, the CSIRT-MU participated in nation-wide cybersecurity fundamentals courses for the elderly.

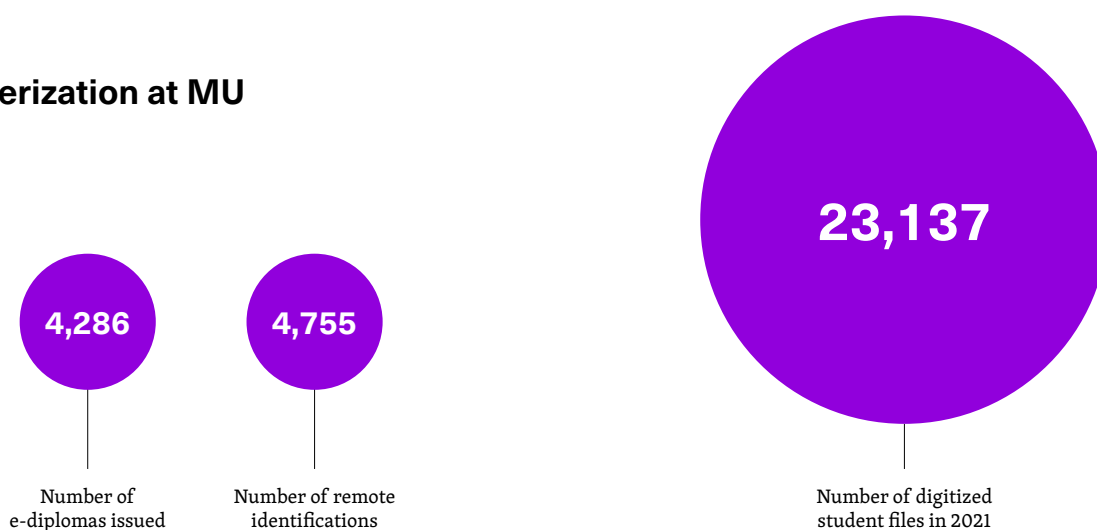
A major achievement for the CSIRT-MU team members was the 3rd place in the *Locked Shields 2021* exercise and their qualification for the finals in the **Global Collegiate Penetration Testing Competition**.

Total visits to www.muni.cz

4,576,000

visits in 2021

Computerization at MU



Number of documents in INET and Magion systems electronically signed using the Signature Book application

243,867

documents in 2021,

i.e. **82%** of the total **298,345** documents

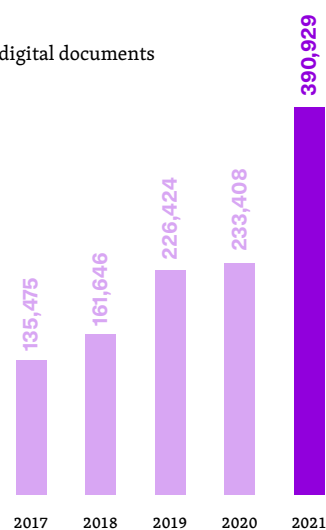
206,967

documents in 2020,

i.e. **77%** of the total **268,625** documents

Development of electronic application processing using the records service application

Number of purely digital documents



MU Information System in numbers in 2021

Total number of IS MU visits

1,582,308,471

61,171

persons used IS MU regularly

90,817

persons accessed IS MU
occasionally

Maximum number of IS MU
pages opened in one day

6,055,345

As of 31 December 2021,
the IS MU data pool held around

190 million

files amounting to a total of

76.4 TB.

Turnover in the SUPO system

132 million CZK

Turnover in MU Shopping Center

169 million CZK

Use of JobCheckIN online portal in 2021

193

employers using
the services of the portal

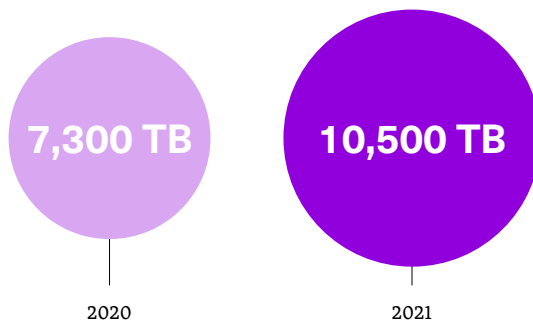
801

job offers advertised

10,440

students and graduates
registered in the portal

Storage capacity available to MU employees



Number of cyber security attacks averted at MU

147,949

6

Institutional Management and Infrastructure

- 6 . 1 University Budgeting
- 6 . 2 Financial Balance Sheet
- 6 . 3 University Management during the Pandemic
- 6 . 4 University Operation in Compliance with Sustainability
- 6 . 5 University Infrastructure and Facilities
- 6 . 6 Strategic Project Preparation
- 6 . 7 Accommodation and Catering Services



MASARYK UNIVERSITY ESTABLISHES THE BOARD FOR SUSTAINABLE DEVELOPMENT AND STRENGTHENS THE SUSTAINABLE ASPECTS OF ITS OPERATION

With the aim to move the university's activities forward as best as possible in the context of sustainable development, the Masaryk University Board for Sustainable Development was established in 2021. All faculties, including students, as well as research workplaces are represented in the Board. It serves as an advisory body of the Rector. In its agendas related to sustainable development and environmental responsibility MU achieved a number of results in 2021. In the area of responsible procurement, these included the preparation of tender requirements and sample contracts taking into account social, environmental and innovation aspects of the procurement process; performance of rainwater monitoring; a comprehensive analysis of waste management for further development; and the application of environmental responsibility in consumption of power solely from renewable resources.

6 . 1 University Budgeting

Masaryk University budgeting rules are defined with the aim to maintain the necessary degree of **financial stability**, while responding to the expected growth of the population curve. These rules also comprise education quality indicators and the indicators derived from the MEYS R&D evaluation and allocation of funds.

Already for the 2021 budget, the calculation of **indicator A** for the individual faculties was divided into two parts: the **fixed component with a weight of 80%**, and the **variable component with a weight of 20%**, for which the faculty shares are calculated based on the current actual numbers of normative studies as of 31 October of the previous year. In the upcoming 2022–2026 period, the fixed/variable component proportions are going to shift to a target ratio of 60/40.

In relation to contract-based funding, **3 parameters** were introduced, which will be monitored and assessed annually. The objective is to maintain MU's current share in the number of all students at public higher education institutions in the Czech Republic as well as the current student-teacher ratio and the quality of the applicants accepted. These parameters include a change of the reference value for the **number of students enrolled in first years** to the value from the previous year reduced by 10%, the introduction of the **number of studies per teacher** as another parameter, and subsequently the **quality of accepted students** (in the variable component of indicator A, students accepted with a LPT percentile below 30 will not be included in the calculation). The performance component indicators were also adjusted. A minor change was the addition of a bonus for student trips to prestigious higher education institutions abroad. From 2022, a bonus will newly be added for student trips to the TOP 500 higher education institutions in the QS World University Rankings.

The basic principles of the methodology of distributing the institution support (in simpler terms the R&D funding), have not changed since 2020 in the budgeting rules. The **performance component** indicators continue to give weight to **prestigious publications, citations and international grants**.

In compliance with the Research Organisations Evaluation Methodology (Methodology 17+), a minor adjustment was made in the manner of calculating certain performance component indicators and their weights. Most importantly, the **Scopus** database was added to the sources for the **evaluation of the publishing activity of faculties oriented towards humanities and social sciences** and the list of prestigious publishers for the *Monographs* indicator was extended. A change was also made in the *Domestic Grants* indicator, which now only includes **prestigious grants such as ERC or EXPRO GACR**. For publication activity indicators, the decile (in addition to quartiles) was introduced and is now given a bonus in the journals ranking.

6 . 2 Financial Balance Sheet

Even in 2021, MU had to cope with the ongoing pandemic, which had a financial impact on internally generated revenues.

Within public sources, which constitute 75% of the total revenues, the **growing trend in the volume of normative sources** allocated by the MEYS continued. Normative sources distributed within MU on the basis of internal budgeting rules increased by 4.4% to almost 3.2 billion CZK, traditionally constituting a major part of all revenues (56%). Other contributions and subsidies from national and international public budgets increased by 2.5% to more than 2.5 billion CZK.

Within internal resources, the **27% increase in accommodation and catering sales** to 80% of the 2019 level was particularly important. Thanks to this increase and the austerity measures, the ACS loss was reduced in year-on-year terms by 16 million CZK.

On the expenditure side, the **trend of growing personnel costs** continued in 2021 (by 7%) and was caused by the growth in the number of employees by almost 4% and the 3% growth in average salary. Recovery in employee mobility led to the growth of travel expenses by 52%, compared to 2020.

Within capital expenditure, **EU structural funds revenues dropped**, as was expected. Despite the higher use of subsidies from programme financing and MU internal resources, capital expenditure dropped by 7% to 1,164 million CZK.

Compared to 2020, the total **revenues** of Masaryk University **increased** by **4.1%** to 7,590 million CZK and **expenses** increased by **3.6%** to 7,503 million CZK. MU reported a **profit** after tax amounting to **87 million CZK**, despite the expected loss of 10.4 million CZK reported by the ACS.

In 2021, **43 public administration and project inspections** took place at MU (reported as per the projects inspected). This number is comparable to the numbers for the two previous periods. Thanks to the computerization of processes and agendas at MU, communication with external bodies and coordination in the second year of the pandemic was smooth.

Of the total number of audited projects, GACR projects accounted for 40%, MI projects for 19%, OP RDE projects for 14%, MIT projects for 5%, Interreg projects for 5%, MA projects for 5% and TACR projects for 2%. The remaining inspected projects concerned, for example, the AZV, SoMoPro and the MC. The MEYS performed an inspection of the use of institutional support on long-term conceptual development of a research organisation.

The results of these inspections did not show any infringement of budgetary discipline. In connection with the inspections of the last period, a payment order was issued amounting to 264 thousand CZK.

6 . 3 University Management during the Pandemic

During the COVID-19 pandemic, the **Crisis Board** and the **Emergency Board of Masaryk University** were set up as advisory bodies to the Rector in order to coordinate the steps directed at tackling the epidemic across the entire university.

Over the entire duration of the pandemic, MU operated its **traffic light system**, which provided guidance for setting the alert level for individual university activities depending on the degree of the epidemic risk. The colour rating was announced on the basis of the conclusions of the Crisis Board with a view to the epidemic situation at the university and in the city of Brno.

In spring 2021, the university arranged for the **testing of MU students and employees** in collaboration with the Helping Hands organization and in autumn 2021 by purchasing self-test kits. On a continual basis, data were collected and statistics created on testing, self-isolation and positive cases at MU and information on the testing of international students was entered in the **MEYS CovidForms App**. In its management during the pandemic, the university relied on its information systems, which at a particular time served not only for record-keeping purposes (e.g. testing obligations), but could also be used as a vaccination scheduling tool.

In spring 2021, the university intensively pushed for priority vaccination of university employees. Thanks to collaboration with the SurGal Clinic, vaccines were obtained for high-risk and senior employees. Subsequently, the university **coordinated the vaccination process** for all **students and employees** who wished to get a vaccine and during the autumn months it set up its **own vaccination points** in collaboration with the Helping Hands organization. Employee vaccination rate reached 89% and student vaccination rate 79%.

Another major area where the university had to respond flexibly during the pandemic was the accommodation and arrivals of international students. The university provided not only standard accommodation to students but also **quarantine and isolation accommodation** over the entire duration of the pandemic.

Through the crisis manager, acting as the MU Rector's Office COVID coordinator, the Technical Operations Office of the Rector's Office ensured the provision of the latest information to the COVID coordinators of individual faculties and economic units and, provided consultations and advice across MU on testing, quarantine measures and individual positive cases.

Over the entire duration of the pandemic, the university monitored and always flexibly responded to the governmental anti-epidemic measures. A change in the colour of the university traffic light system and other important measures were always communicated to employees and students beforehand in a **newsletter**.

6 . 4 University Operation in Compliance with Sustainability

In its agendas related to sustainable development and environmental responsibility, managed at the university level, MU achieved the following of results in 2021.

Within a MoLSA project, measures were adopted toward more **responsible procurement**. Standard tender requirements and sample contracts were prepared, taking into account social, environmental and innovation aspects of the procurement process, and the *Public Procurement Directive* was updated in collaboration with individual economic units.

In the University Campus at Bohunice, certain water management measures were successfully implemented, including a modification of the existing retention tank, installation of new tanks and the creation of conditions for a further expansion of green areas. This was all linked to the monitoring of rainwater.

All **new buildings** and selected reconstructions at MU may be regarded as **energy saving and environmentally friendly**, which is in line with the long-term trend (green roofs, photovoltaic panels, etc.). More than half of the MU buildings meet the requirements of the European SMART energy standards.

The university also applied an environmentally responsible approach in electricity purchases for the year 2021, with all its supplies coming from renewable resources. Waste management standards have also been high at MU for a long time. In collaboration with the Sustainability and Circularity Institute at the FEA, a **comprehensive analysis of waste management at MU** was performed, which will serve as a basis for the creation of the MU waste management strategy.

In 2021, the Management of the University Campus at Bohunice developed instruments and procedures increasing building and technology management efficiency, which by extension increases the comfort of their users. Many of the MU buildings may now be classified as smart, because they use technology management and monitoring systems. In 2021, a new version of the **technology management and monitoring system software** was deployed and the methodology of the M&R and management systems of building technologies was updated.

In the area of Building Information Modelling, the university focused on the creation of a **methodology for documentation of external areas**, complete documentation of the Kejbaly premises (FEdu) and the external areas of the FEA. At the University Centre Telč, fire compartmentation was performed and evacuation plans prepared. The building and technology data are managed in the form of **digital building documentation** (documentation of construction, technological and external areas). With the support of the ICS, this is accessible through web and mobile applications, database services as well as drawings or made-to-measure documents, e.g. for public procurement needs.

6 . 5 University Infrastructure and Facilities

Following the Masaryk University Strategic Plan for 2021–2028, the implementation of construction and other investment activities for the **development of teaching and research infrastructure** continued. Investments were prepared and implemented for the development of faculties and the related infrastructure as well as the University Campus at Bohunice.

The MEYS subsidy programmes included projects within programme funding. Registration for the **Reconstruction and Completion of the Botanická Complex** project was not obtained because work on the detail design as required by the subsidy provider was still being done.

The **Reconstruction of Auditoriums at the Faculty of Law** was completed, including the delivery of interior furnishings and audiovisual equipment. In 2021, 50.5 million CZK was expended on the project. The total project costs amounted to 73.7 million CZK.

In 2021, the implementation of the **Replacement of Heating and Cooling Sources in the UCB** continued. In the given period, the implementation of three out of five phases was completed and 14 heat pumps in 13 pavilions were delivered and commissioned. The building works in 2021 amounted to 112.8 million CZK.

The project registration decision was obtained and the building permit documentation prepared for the **Student Centre in the UCB**. The estimated cost of the project is 395 million CZK. Within the sub-programme for the development and renewal of accommodation and catering capacities, the **canteen at the FEdu** was built. The total construction cost, including interior furnishings and cooking equipment, was 34.3 million CZK. The preparation of the project design for the **UCB Catering Centre** continued. The estimated costs are 250 million CZK.

Research equipment for SIMU FMed for 67.8 million CZK, comprising medical and dental simulators, was installed at the Faculty of Medicine in 2021. For the conversions of pavilions A18 and A19 in the UCB, project registration was obtained and the building permit documentation completed. The extension of the existing facilities and the building of new lecture rooms and laboratories is estimated at 58.4 million CZK.

Adaptations to the Building at Poříčí 31, including the reconstruction of the gym, the Psychology Department offices and sanitary facilities in the entire building, continued at the FEdu. The total reconstruction costs were 23.1 million CZK. The FEdu obtained a project registration decision for the **Extension and Superstructure of the Department of Arts Studio**. A building permit was issued and the procedure for the selection of the contractor launched. The estimated costs are 33 million CZK.

In addition to programme and project financing, MU implemented **39 construction investment projects from its own resources for 110 million CZK** in 2021. The major projects included the construction work for the FMed at the UCB for 9 million CZK, the reconstruction of the roof of the FA building at Joštova 13 for 9.8 million CZK, the reconstruction of the load-bearing structures and the common spaces at the FLaw for 6 million CZK, the partitioning of the lecture rooms at the FSS for 9.3 million CZK, a partial reconstruction of the FSci premises at Kotlářská at the

UCB for 16 million CZK, the reconstruction of the gas boiler room at the FEdu for 3.5 million CZK, the reconstruction of the FSpS premises at Veslařská for 5.8 million CZK, the reconstruction of the heat exchanger in a FSpS gym for 4 million CZK, the adaptation of the existing CEITEC laboratories for 9.1 million CZK, the reconstruction of the sewerage at the Rector's Office for 4.1 million CZK, and the building adaptations at the CIC at Komenského náměstí for 7 million CZK.

Several OP RDE projects were implemented in 2021.

These included the much needed reconstruction of the interiors of the **SIMU FA training and recording studio**, including the installation of adequate audiovisual equipment. The financial costs were 25.8 million CZK. The building of the simulation track with barrier-free elements in the **SIMU FEdu** was completed in 2021 with costs of 228 thousand CZK. The barrier-free sanitary facilities at the Faculty of Arts buildings for **SIMU FF** were obtained for 9.5 million CZK.

In 2021, adaptations of the existing laboratories for the **CEITEC-KRYO** for the installation of new research equipment were launched. The project costs are 35.8 million CZK and the building works in 2021 amounted to 10.9 million CZK.

A major development project in the UCB is the implementation of the **MUNI Biopharma Hub**, which will be funded under the NRP. The project involves the placement of the Faculty of Pharmacy in the spaces of the university, the building of the preclinical and molecular medicine centre, with a focus on innovation for a healthy and safe society. In 2021, project works were launched and the documentation for the land use decision was completed.

For the completion of the multi-purpose open **athletics centre and indoor sports hall at the FSpS** in the UCB, the documentation for the land use decision was prepared. Part of the funds should be covered by a National Sports Agency subsidy. The estimated cost is 330 million CZK.

6 . 6 Strategic Project Preparation

The Masaryk University Strategic Development Project 2021+, approved in November 2020, progressed significantly in its implementing phase, primarily thanks to the **MUNI BioPharma Hub**.

The MUNI BioPharma Hub, supported from the Czech National Recovery Plan (NRP), constitutes a comprehensive intention to build **modern infrastructure for the Faculty of Pharmacy**, including key complementary units such as the **Preclinical Education Centre**. The MUNI BioPharm Hub will also include IT infrastructure for the support of modern in-person, hybrid and remote synchronous and asynchronous teaching.

The project will support more than ten degree programmes at the Faculty of Pharmacy, the Faculty of Medicine and the Faculty of Science. The intention also is to develop new **interdisciplinary degree programmes** responding to the necessity to enhance the resilience of the Czech Republic in critical areas affected by the current pandemic risks.

In 2021, the land use documentation was completed for the MUNI BioPharma Hub project, which has progressed into the building permit documentation phase.

The MUNI BioPharm infrastructure should be used by **more than 7,000 undergraduate students** at the **FPharm, FMed and FSci** and at least a thousand academic and non-academic workers at these workplaces. The implementation of the project will enable efficient use of the premises of the University Campus at Bohunice – North and will integrate an area of **over 13 thousand m²** into one of the **largest campuses in central Europe**.

In 2021, Masaryk University was involved in the preparation of five strategic research projects under the **EXCELES** Programme for the Support of Excellent Research in Priority Areas of Public Interest in the Health Sector within the National Recovery Plan.

The thematic focus was on **research in oncology, virology, cardiology and social sciences**, with the aim to enhance the resilience of the Czech Republic against systemic risks. In collaboration with other top Czech research organisations, these projects will result in the establishment of new national research institutes connecting research infrastructure at the national level.

6 . 7 Accommodation and Catering Services

The **Accommodation and Catering Services (ACS)** is a special-purpose facility of Masaryk University that provides catering and accommodation services to students, employees and the public. For the ACS, the year 2021 was characterized by continuing anti-epidemic measures, which had an enormous impact on the growing operating costs.

In 2021, the ACS financial management was influenced by the coronavirus crisis and the ACS generated a loss. The continuing closure of faculties and the online teaching due to the restrictions by the Czech government caused a major **drop in the numbers of students** using the accommodation and catering services. The restrictions on hotel services and tourism reduced the numbers of accommodated guests. The total deficit was also caused by the inability to organize social events, and provide supplementary and catering services.

During the anti-epidemic measures, the ACS tried to the maximum extent possible to ensure **accommodation for students in halls of residence, while complying with the defined sanitary measures**, always on the basis of a decision by the MU Crisis Board. Isolation accommodation for students with visa obligations was ensured at the B&B Hotel University Brno.

Thanks to the restructuring and defining of new management processes, a **considerable cost savings and revenue increase** was achieved in 2021, without negatively impacting the quality of the services provided. Compared to the plan, the ACS managed to significantly reduce its loss, amounting to more than 52 million CZK in total.

The operation of catering services continued to follow the changes adopted. All canteens are introducing a new unified menu of meals with an emphasis on the **quality and the nutritional values of the foods and the sustainability of cooking**. In addition to meat and low-energy meals, students can also choose gluten-free or vegetarian meals, soups, sushi, salads and other foods. The presentation of a wide range of meals, including fast food, is available in the dining rooms on LCD monitors in Czech and English.

In 2021, the **reconstruction of the canteen at the Faculty of Law** was finished so that it could be reopened together with the **new canteen at the Faculty of Education** in spring 2022. Thanks to good planning, the ACS manages to increase the sales of meals with maximum effectiveness and sustainability in cooking. Thanks to the meal ordering system, customers may choose their preferred meal, while maximising the savings in the consumption of food thanks to centralized cooking. Meals may also be ordered via mobile phones and there is a possibility of cashless payments.

Despite the adverse financial situation, the university management **approved investments in the renewal of the rooms** in the last block A1 of the **Vinařská Halls of Residence**, which will increase the comfort of the accommodation for Masaryk University Students.

Financial management of MU in 2021

MU managed the total budget of

8,753,231 thousand CZK

Profit

86,829 thousand CZK

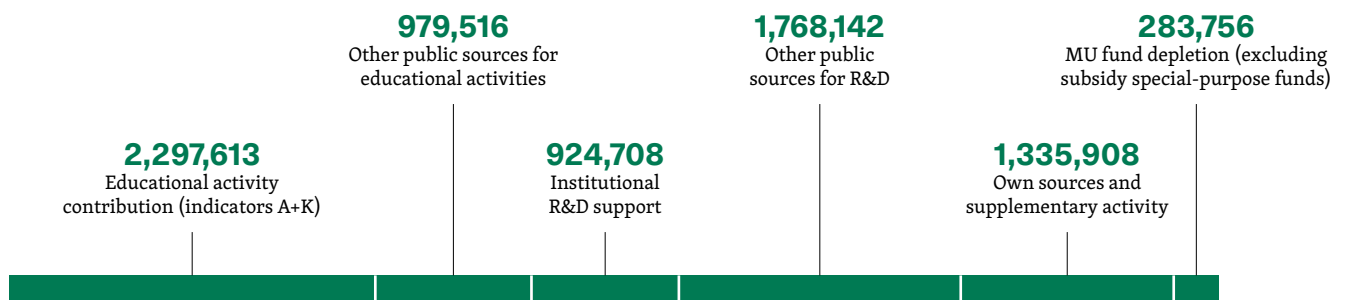
Total non-investment revenues and investment expenditure at MU

in thousands CZK

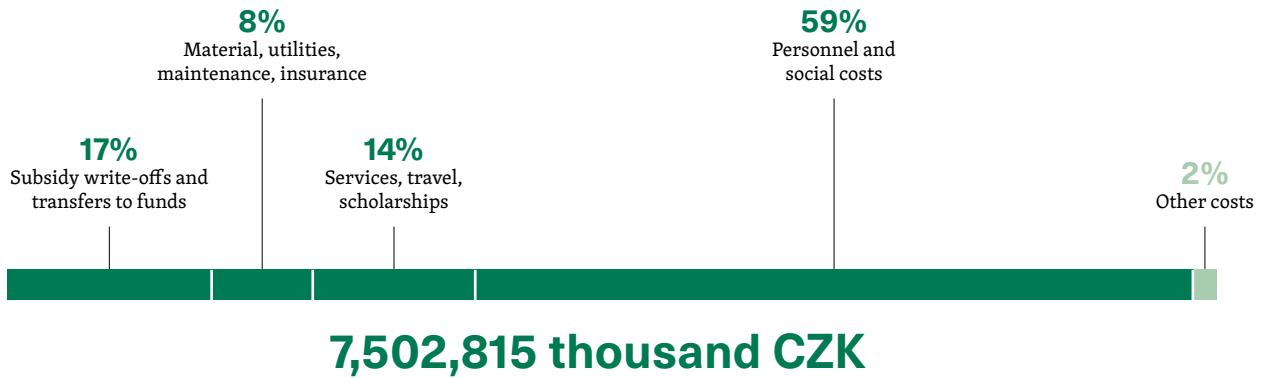


Structure of non-investment revenues in 2021

in thousands CZK

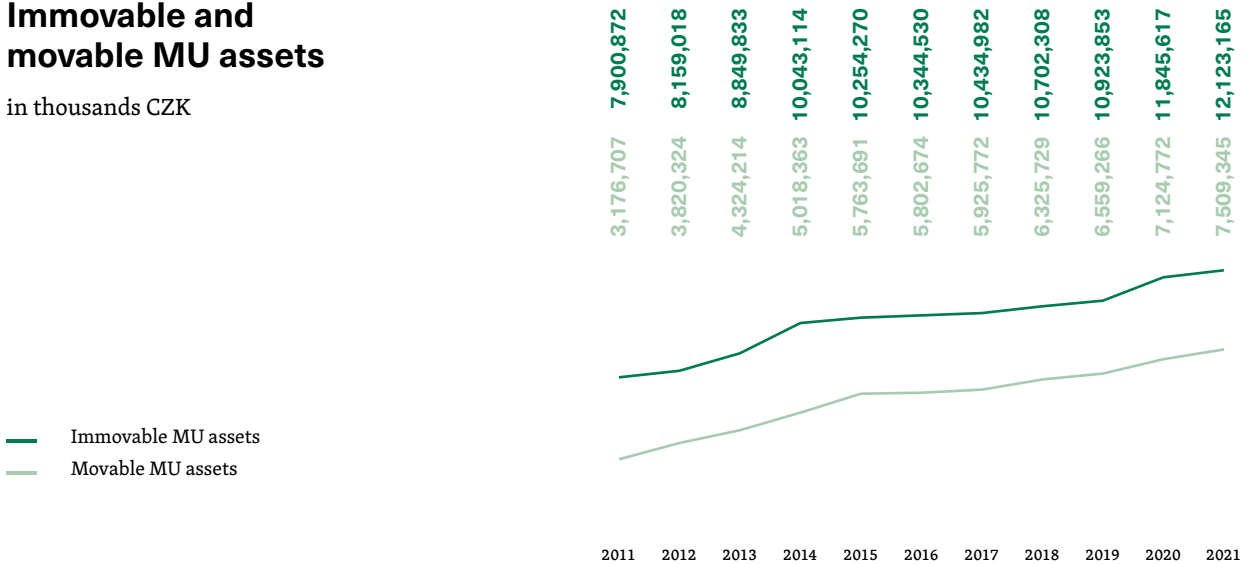


MU cost structure in 2021

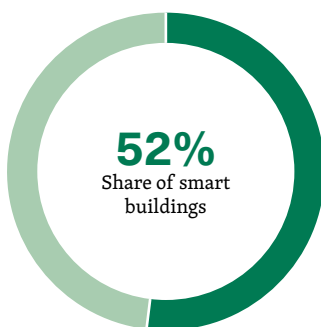


Immovable and movable MU assets

in thousands CZK



MU facilities in 2021



Total number of facilities

124

Useful area of these facilities

446,883 m²

Net useful area of these facilities

272,584 m²

Classrooms and laboratories

63,501 m²

Outdoor sporting grounds

9,309 m²

Libraries, archives and reading rooms

9,398 m²

MU Faculties and University Institutes

Faculty of Law

Faculty of Medicine

Faculty of Science

Faculty of Arts

Faculty of Education

Faculty of Pharmacy

Faculty of Economics and Administration

Faculty of Informatics

Faculty of Social Studies

Faculty of Sports Studies

Central European Institute of Technology

Institute of Computer Science



Faculty of Law

2,945
applications submitted

3,223
students in total

128
students from Slovakia

13
students from abroad
(outside Slovakia)

540
graduates

179
employees (FTE)

8
international research projects

In the area of teaching and education, **accreditation** for the **Public Administration** follow-up Master's programme was obtained in 2021. In the major Master's programme **Law and Legal Science**, the principles of reform were articulated and a new system of teaching private law and legal theory was implemented.

The Faculty of Law progressed further in its **comprehensive reform of the practical training system** – the most visible change is the introduction of trainees' reflective diaries. In 2021, the faculty also approved **new scholarship programmes** to support students with excellent study achievements and to support writing a Master's thesis in a foreign language. To prevent premature study termination, the faculty established the institution of a **student ombudsman**, to extend the forms of assistance particularly to combined mode students.

During 2021, the faculty introduced blended learning into remote education. Online transmission of lectures became the norm. Thanks to new technologies, students were able to participate interactively in seminars. A total of **14 new online courses** were created, of which two were in English.

The range of the foreign-language courses offered at the FLaw has expanded again, now to 50 per year. The possibility to study abroad under the Erasmus+ programme was also newly open to the students of Bachelor's and follow-up Master's programmes.

Long-term cooperation with the Universität Wien, the European Academy of Legal Theory and newly also Ferenc Mádl Institute made possible the organization of the **10th Autumn School of Global Legal Skills 2021**, which took place from 15 November to 13 December 2021.

The FLaw also organized **LL courses on a introduction to law** for senior citizens, for translators and interpreters and for consultants. **The Introduction to Law for Senior Citizens** course gave senior citizens an opportunity to gain general knowledge of and become familiar with the classic legal disciplines. As part of the entrance examination preparatory courses, the faculty prepared six new thematically focused online courses for the public.

In doctoral studies, the faculty adopted an updated directive laying down **unified requirements for doctoral theses**. To support high-quality publications, the scholarship regulation was modified to increase bonuses for the most valuable publications, in line with the Methodology 2017+. The faculty also updated its methodological materials for supervisors and students, including new guidelines for the preparation and implementation of specific research projects.

For the first time ever, the faculty won a **GACR JUNIOR STAR** grant for a project entitled *The Role of Courts in Shaping Migrants' Rights* led by Madalina Bianca Moraru.

During 2021, a **series on the history of the FLaw** was made in collaboration with Jaromír Tauchen. All 30 videos were offered to the general public on the faculty YouTube channel. Josef Bejček was awarded a medal for *Contribution to Competition and Public Procurement* and Lukáš Potěšil accepted the *Commemorative Medal of the Legislative Council*.

The successful cooperation between the FLaw and *Jan Hus Educational Foundation* continued in 2021 with the 14th year of the **Ius et Societas Award**. The 23rd year of the Students' Research and Professional Activities SRPA and another interfaculty Czech-Slovak Student Scientific Competition also took place.

A major **reconstruction of four large lecture rooms** took place from December 2019 to June 2021. Aside from modernizing the lecture rooms, the key issue that had to be tackled was the critical condition of the Faculty of Law building, caused by aluminate concrete ceilings. The lecture rooms now have new interiors and audiovisual equipment which enables the interconnection of all the four rooms and streaming and recording of lectures. The complete reconstruction cost 62 million CZK. On the occasion of the successful completion of the entire construction project, the faculty organized a **cere- monial opening of the reconstructed spaces**.



DAVID KOSAŘ TO INVESTIGATE A SECOND EUROPEAN RESEARCH COUNCIL GRANT

An extraordinary research achievement for the Faculty of Law – David Kosař succeeded in the ERC Consolidator grant call with his INFINITY project (*Informal Judicial Institutions: Invisible Determinants of Democratic Decay*), which he started to investigate in 2021. Winning two European Research Council grants in a row is exceptional (the first ERC grant was awarded in 2016), all the more so as these are the only law-related ERC grants implemented on Czech territory. The supported INFINITY project combines legal theory, sociology and political science. Its main objective is to identify the most important informal judicial institutions, assess their impact on the justice system in the country, analyse the influence that the EU and the Council of Europe have on these structures, and launch a new direction in research into justice.

Photo: David Kosař, holder of two ERC grants, who also received the Rector's Award

Faculty of Medicine

8,929
applications submitted

4,677
students in total

1,063
students from Slovakia

940
students from abroad
(outside Slovakia)

735
graduates

661
employees (FTE)

18
international research projects

In 2021, the Faculty of Medicine not only continued to fulfil its educational function but was also very actively involved through its students and employees in **volunteering** over the entire duration of the pandemic as well as assistance in connection with the elimination of the consequences of the tornado in South Moravia. At the same time, despite the persisting anti-epidemic measures in 2021, **practical training continued**. The quality of **online teaching** at the faculty also increased considerably in 2021. Tools such as *Kahoot*, *Slido* and a purchased *Socrative.com* licence were used to ensure interactivity in teaching. A license was obtained for the *Nursing Reference Center Plus*, which proved useful as an information source for the study field of *Nursing*.

The admissions procedure at the faculty took place in the standard mode, while respecting the valid protective measures. Some of the applicants for the *General Medicine* programme were accepted without an entrance examination, based on their excellent grades at secondary school, selected language competencies or placement in school competitions.

25 students studied at the Faculty of Medicine in the **Foundation preparatory programme** for international students interested in studying *General Medicine* or *Dentistry*. 71 international students studied at the Faculty of Medicine under the Erasmus+, Freemover and IFMSA programmes and 248 FMed students travelled abroad.

In 2021, the Faculty of Medicine organized the **Junior Academy**, aiming to support gifted secondary school students. The project materialized in the form of courses for secondary school students or special *Days with Medicine* for prospective students.

In teaching, changes are successfully implemented in compliance with the valid accreditation of the **FMed Simulation Centre** for the *General Medicine* programme. In the *Dentistry* and *Dental Hygiene* degree programmes, almost all teaching takes place in the simulation centre.

The transformation of study fields to programmes gave rise to the follow up **Applied Physiotherapy** Master's programme. The Faculty of Medicine is the only institution in the Czech Republic offering this specialized qualification.

In collaboration with universities abroad, four new **COIL courses** (*Collaborative Online International Learning*) were organized, namely *Clinical Radiobiology*, *Global Health*, *Clinical Pharmacology*, and the *Anatomy Clinical Series*.

In 2021, FMed academics and researchers submitted **265 internal, national and international projects**. The objective was to focus on strategic projects (Horizon Europe, Teaming, European Research Council, National Recovery Plan) together with support for junior researchers (FMed Internal Grant Agency) and start-up projects.

In December 2021, a **Healthcare Simulation doctoral degree programme** was accredited at the faculty. Over 500 students studied in the Czech-language doctoral programmes at the FMed in 2021. 20 students studied in six English-language doctoral programmes, receiving the same scholarship as Czech students from the faculty's internal resources.

In autumn 2021, the faculty became a member of the **Orpheus** international organization, which associates educators of doctoral students in biomedicine and health sciences. Since June 2021, the FMed has been a member of the **SPARK Global** international network, connecting more than 60 institutions worldwide and supporting the transfer of biomedical research to clinical practice.

Faculty support of **student associations** is reflected in a wide range of student scholarships, which allow for the funding of a vast spectrum of social and awareness-raising activities with humanitarian significance. As the principal coordinator, the FMed got involved in a blood donation promotion campaign and organized a **University Blood Donation Cup** in collaboration with other Brno universities.



A GIFTED SECONDARY SCHOOL STUDENT COLLABORATES IN MEDICAL RESEARCH AND WINS THE ČESKÁ HLAVIČKA AWARD

For three years now, Martin Kaleta, student of Purkyně Grammar School in Strážnice, has been researching brain haemorrhages and strokes. Firstly, he got familiar with the medical research within the university's *Bioskop* project. At the Faculty of Medicine under the guidance of the Head of the Department of Anatomy Marek Joukal, Martin Kaleta got involved in the research into haemorrhagic strokes. With his work, Martin Kaleta succeeded in the national round of Students' Professional Activities and subsequently won the Česká hlavička Award in the Healthcare category. Thanks to his activities, he became the first notable face of the FMed Junior Academy, which aims to motivate gifted secondary school students.

Photo: Secondary-school student Martin Kaleta, accompanied by his mentor Marek Joukal, received the Česká hlavička award

Faculty of Science

3,202
applications submitted

3,540
students in total

698
students from Slovakia

247
students from abroad
(outside Slovakia)

860
graduates

969
employees (FTE)

32
international research projects

In 2021, the Faculty of Science **elected its Dean** for the 2022–2026 term. On 18 October 2021, **Tomáš Kašparovský** was re-elected Dean of the Faculty for a second term, starting from February 2022. The Dean's goal for his second term of office is, among other things, to push through hybrid education, combining full-time studies with teaching materials created for remote teaching during the COVID-19 pandemic.

The persisting pandemic in 2021 stimulated further development of the faculty and inspired a number of **volunteer activities**. A number of results of thematic research projects implemented at the faculty received great publicity, such as the widely received interviews with Vojtěch Thon or Omar Šerý.

The faculty also continued to organize a large number of **popularization and educational activities** for primary and secondary school students and their teachers. In 2021, the faculty organized more than **100 individual lectures and short-term courses** and activities in online or in-person mode.

In February 2021, the FSci, which was the first faculty of the Masaryk University to win the **HR Award**, received a highly positive response from the European Commission to the Internal Review after two years of implementing the action plan.

The faculty portfolio in 2021 offered a choice from 20 Bachelor's and 37 Master's programmes, including the new English **Molecular and Cell Biology** programme. Within the redesigned admissions procedure, the faculty used its own system of personalized evaluation, taking into account the motivations and professional preferences of applicants.

In 2021, the Faculty of Science **employed over 140 foreign nationals** (not including Slovak citizens) and had **246 international students**. During 2021, **16 international experts** visited the faculty.

A major success for the FSci was the **2021 GACR President's Award** to Vladimír Šindelář. The award was given for the *Chiral bambusurils* project. Chiral bambusurils are organic substances that can carry anions, which makes them useful in diagnostics or treatment of certain diseases, such as cystic fibrosis.

A research project on the **development of high efficiency thermoelectric materials** and especially on the study of their long-term operational stability was evaluated as excellent by the GACR. The team working on this three-year project was led by Pavel Brož from the Faculty of Science, alongside a team of researchers from the Czech Academy of Sciences, led by Jiří Buršík, and colleagues from the University of Vienna.

In total, the faculty investigated more than **300 basic and applied research projects**, of which 24 were EU H2020 projects, 89 were GACR projects, including four EXPRO projects, 29 OP RDE projects and 24 TACR projects. Research results included over 1,400 articles in impacted international journals and over 25 application results (patents and alike). In 2021, the **implementation of the prestigious GACR EXPRO grant** with a five-year financial allocation of 37.5 million CZK to Norbert Werner's project *Exploring the Hot Universe and Understanding Comic Feedback* was launched. At the same time, the investigation of another 11 standard GACR grants was launched at the FSci.

In 2021, activities of doctoral programme students were supported in the form of **motivational scholarship payments**. Beyond the usual scholarships, which amounted to 74.4 million CZK, an additional 26.2 million CZK was paid to doctoral student activities. The proof of the quality of research at FSci is in the excellent achievements in the prestigious **Brno PhD Talent 2021** competition, in which FSci doctoral students won 15 out of 25 three-year scholarships from the South Moravian Region.



RESEARCHERS TEST CORONAVIRUS IMMUNITY OF CZECHS

Over 30 thousand people in the Czech Republic participated in the unique PROSECO study coordinated by experts from the RECETOX Institute of the Faculty of Science of MU under the leadership of immunologist Vojtěch Thon. The serological prospective study monitored specific memory antibodies to SARS-CoV-2. The RECETOX biobank daily collected and stored hundreds of samples to examine how the immunological memory response to the new coronavirus infection develops. Interim results of the study showed that in some individuals the memory antibodies did not decrease over time but actually increased. The study provided valuable long-term data on the spread of the virus and the dynamics of the development of antibodies. The project under the expert guidance of Masaryk University was implemented by the Czech Ministry of the Interior Public Health Insurance Fund together with the Asociace laboratoří QualityLab.

Photo: Vojtěch Thon, head of the nationwide prospective seroconversion (PROSECO) study

Faculty of Arts

8,074

applications submitted

6,678

students in total

953

students from Slovakia

379

students from abroad
(outside Slovakia)

1,323

graduates

535

employees (FTE)

8

international research projects

The year 2021 at the Faculty of Arts was dedicated to the celebrations of the **100th anniversary of teaching** at the faculty. On this occasion, bronze commemorative plaques were placed on the faculty building on the corner of Arne Nováka and Grohova Streets dedicated to the significant figures of the founding generation. On the occasion of the anniversary, the Dean organized, as part of the *Humanities Week*, a ceremony during which bronze commemorative medals were handed out to personalities who contributed significantly to the faculty's development.

In autumn 2021, an election of the new Faculty of Arts Dean for the 2022–2026 term was announced. For the first time in history, there were two women, both from the Department of Classical Studies, competing for the position. In the end, **Irena Radová**, the department head, was elected the **new faculty Dean**, with effect from 1 April 2022.

In the admissions procedure, the option of an entrance examination waiver on the basis of secondary school achievements in the profile subjects was strengthened. Considerable progress was also made in the digitization of the admissions procedure. The faculty equipped all lecture rooms for **hybrid teaching** and prepared methodological support through workshops for teachers. During the year, the library launched **Makerspace**, a new educational space providing access to technologies such as 3D printing or virtual reality.

Within the *Masaryk University Strategic Investments in Education SIMU+* project, a new recording and acoustic studio and a sound laboratory were built for the development of the new Master's degree programme **Sound Design and Multimedia Technologies**. Within the *Lifelong Learning Support and Development* project 14 new online courses were offered in 2021.

In 2021, the Faculty of Arts launched the implementation of a prestigious international **ERC grant**, funding a project of **David Zbiral** from the FA Department for the Study of Religions, *Networks of Dissent: Computational Modelling of Dissident and Inquisitorial Cultures in Medieval Europe*.

In 2021, for the first time the faculty granted the **Dean's Award for the Development of the Faculty's International Cooperation**, which is intended for those academics who significantly contributed to international cooperation.

In the course of the year, the accreditation renewal process, in which doctoral fields were transformed into programmes, was completed. Under the **IGA MU** programme, **15 doctoral students** received scholarships to facilitate the conditions of their doctoral studies.

The prestige and reputation of the Faculty of Arts as a research institution was enhanced thanks to the **HR Excellence in Research Award** (HR Award), granted to the faculty by the European Commission in April 2021. As part of the HR Award, an extensive survey was performed among doctoral students. Its assessment serves a thematic working group whose task is to define the points of further development and increase the quality of doctoral studies at the FA.

In 2021, collaboration between the faculty and the **Mission of Hope** non-profit student association continued in several charity events. The goal of the competition entitled **It all begins with an idea** was to support students' ideas on how to give help to disadvantaged and disabled groups. During the Advent season, the faculty in cooperation with the *Mission of Hope* student association organized for the second time the **Smile in a Mailbox** event, collecting over 700 postcards, letters and wishes, which were subsequently delivered to senior citizens.

Also in 2021, the FA opened the **DOBRO_ARTS Volunteering** course, enrolled in by more 100 students. The most frequent forms of help given by students were assistance to the elderly and the disabled, whether in all kinds of care facilities or directly at home, tutoring children and babysitting. FA students also put themselves out to help the tornado-stricken South Moravian villages.



THE FACULTY OF ARTS WINS THE GACR AWARD FOR EDUCATIONAL RESEARCH

An educational research project at the Faculty of Arts boasts a prestigious award which makes it one of the best basic research projects in the Czech Republic. Professor Klára Šedová and her team found in their research, which lasted for several years and was focused on teacher-student dialogue, that more communicative pupils who are actively involved in learning achieve better results than their quietly listening peers. The Czech Science Foundation (GACR) rewarded Professor Šedová for outstanding achievements which satisfy the high demands placed on research activities, contribute to the expansion of the current state of knowledge and significantly influence the development of the field in the Czech and international context. The GACR Awards have been granted since 2003 and the Faculty of Arts succeeded in social sciences and humanities after 17 years.

Photo: Klára Šedová, Professor at the Department of Educational Sciences, Faculty of Arts

Faculty of Education

7,686
applications submitted

5,179
students in total

147
students from Slovakia

82
students from abroad
(outside Slovakia)

1,158
graduates

307
employees (FTE)

18
international research projects

In 2021, the faculty considerably expanded its activities in **remote education**. Based on its own experience with the challenges of online teaching, the faculty built its own **audiovisual studio** which helps teachers with the preparation and processing of audio and video outputs and advises them on the possibilities of using these materials in teaching. A teachers' and students' portal for digital education **DigiCompEdu**, facilitating orientation in the possibilities of digital teaching was also created. A series of online meetings called **Inspiration Online** was organized for the FEdu staff to share their online teaching experience and knowledge.

The faculty also reports an increased interest in the admissions procedure for the 2021/2022 academic year. The number of applications for Bachelor's studies grew year-on-year by 19%. In the course of the year, the faculty created and added to its portfolio the **Teacher Training** programme – a **new follow-up degree programme**, which is targeted particularly at graduates from specialized non-teaching Bachelor's programmes and which is to give them the necessary qualifications for teaching one of the provided subjects at primary and lower secondary schools. Combined studies were redesigned as well, and students may now complete **part of the studies online**. This change increases the comfort for combined-mode students, who come to the FEdu from all over the Czech Republic.

The conditions of study in the **lifelong learning programmes** were unified in 2021. The faculty updated its guidelines for opening courses, unified the admissions procedure dates and performed an audit of content with a view to valid accreditations. In 2021, there were 21 LL courses and 50 accredited LL programmes on offer. A particularly popular programme was the *Study of educational sciences focused on the preparation of secondary school teachers*.

The most prominent event in international relations was the **international conference of the members of the ETEN Board** (European Teacher Education Network), in which 57 participants participated at the faculty, of whom 36 were from abroad. The faculty continued to work intensively on the development of its international cooperation with the **EDUC Alliance** universities. **Three COIL courses** were created and implemented and **over 300 students** were involved in **virtual mobility**.

In 2021, the Faculty of Education participated in **80 projects** for almost 60 million CZK, of which 47 were research projects and 33 were development projects. For example, the investigation of a project leading to the creation of a new type of school report containing elements of formative evaluation was launched.

One of the significant prizes granted in 2021 to faculty employees was the **South Moravian Region Award** given to Jiří Poláček from the Department of Czech Language and Literature for contributing to the fame and reputation of the South Moravian Region.

In 2021, the FEdu also addressed the general public with a new series of webinars entitled **Educational Insights**, offering the views of experts on current issues of educational practice and schooling.

One of the most significant faculty events that took place in 2021 was a lecture by Karl Habsburg-Lothringen entitled *Protection of Cultural Heritage of Mankind in Armed Conflicts, Role of Present-day Teachers and Presentation of Cultural Heritage of Nations in Teaching*. The **publication of the BEZRÁKOSKY didactic cards**, which help tackle disciplinary issues, was generally well-received by teachers.

The faculty keeps open the **PidiMuňátka Children's Centre**, offering babysitting services to its employees, doctoral students and in exceptional cases also to Bachelor's and Master's students.



THE FACULTY OF EDUCATION OPENS A (POST)DOCTORAL SCHOOL

In February 2021, the Post(doctoral) School launched its activities at the Faculty of Education. Its objective is to facilitate the development of the faculty's doctoral community, the integration of postdoctoral students among researchers and the support of their interdisciplinary cooperation. Through lectures and workshops, it is supposed to give prospective PhD holders space to share experience and give them support in the early stage of their research career. At the Faculty of Education, this is an important change which brings the development activities for doctoral students in the individual degree programmes and years together on a single platform. The school's portfolio includes methodological workshops, lectures of prominent experts, faculty-wide conferences for doctoral students, informative events for prospective doctoral students, and courses in publication and other skills.

Faculty of Pharmacy

5 2 7

applications submitted

7 9 7

students in total

1 9 0

students from Slovakia

4 5

students from abroad
(outside Slovakia)

1 2 0

graduates

9 7

employees (FTE)

2

international research projects

The study portfolio at the Faculty of Pharmacy in 2021 consisted of one Master's and five doctoral degree programmes accredited in the Czech language and one Master's and three doctoral degree programmes in the English language. Thanks to the exemption for healthcare fields of study, laboratory teaching at the FPharm during the pandemic in 2021 took place in a standard manner for small groups of students.

Lifelong learning at the FPharm was focused on the academic community as well as the professional and non-expert public – such as in the **Interaction of Pharmaceuticals and Environment** course or the **Management in Pharmacy** series, which offered in collaboration with the Faculty of Economics and Administration a series of lectures on the economic aspects of the management of pharmacies and business activities in the pharmaceutical industry. Several lifelong learning courses were also organized to educate the public in the field of pharmaceuticals.

Scientific, research and creative activities at the FPharm continued to focus on comprehensive studies and the assessment of pharmaceutical and other related products playing an important role in the prevention, diagnostics and treatment of illnesses of humans and animals. The faculty's research achievements include in particular the **Vice-rector's Award for Excellence in Doctoral Studies** to Veronika Leláková and the **MUNI Innovation Award** to academic Jiří Zeman for his research achievements.

A vast majority of FPharm publications in scientific journals (J_{imp}) were in the Q1 or Q2. In grant calls, the Faculty of Pharmacy succeeded, for instance, in a Ministry of Health competition, actively joining a research project aiming to prepare and test targeted thrombolytics for the **diagnosis and treatment of stroke** in a preclinical animal model. In the LA GACR competition, the FPharm succeeded with a co-investigated project on complexes of transition metals with natural compounds and their biological activities.

In spring 2021, students and employees volunteered within the #MUNIHELPS call and also within the call by the Regional Association of Pharmacists during the preparation of vaccines in the **vaccination centre** at the Brno exhibition centre. In April of the same year, the faculty also joined the public debate on the testing of primary and secondary school pupils for COVID-19. Despite the pandemic, the faculty managed to organize several social events, first and foremost the celebrations of the **faculty's 30th anniversary** or the faculty barbecue at the start of the autumn semester.

The FPharm maintains important collaboration with research and professional organizations. In the domain of pharmacy, these include in particular the Czech Pharmaceutical Society and the Czech Chamber of Pharmacists. Both the organizations are represented in the FPharm Scientific Board and collaborate with the faculty on the creation and assessment of its degree programmes. The educational and creative activities of the FPharm and its staff are also reflected in the collaboration in lifelong learning of pharmacists and other healthcare professionals and in the organization of scientific conferences and symposia.

In 2021, the Faculty of Pharmacy was involved in international cooperation as a regular member of the **European Association of Faculties of Pharmacy**. This association coordinates further development of the pharmaceutical education at the university.

At the Department of Pharmacology and Toxicology, the traditional **Květinův Den**, an **interdisciplinary conference** on pharmacology and toxicology topics, took place in June 2021. As part of the 30th anniversary celebrations, a *Day of Technology* took place in October.



PHARMACY CELEBRATES 30 YEARS FROM ITS RESTORATION IN BRNO

For the Faculty of Pharmacy, the year 2021 was a period of integration into Masaryk University, following the transfer launched in July 2020. A new faculty management was appointed. David Vetchý was elected the new Dean, with a term of office commencing on 1 April 2021. 2021 was, first and foremost, a jubilee year for the Faculty of Pharmacy, which remembered the 30th anniversary from the resumption of pharmacy studies in Brno. Pharmacy returned to Brno from Bratislava on 13 November 1991 with a ceremonial opening of the studies at the Faculty of Pharmacy as part of the former Veterinary University. Part of the anniversary celebrations of 26 October 2021 was a ceremonial meeting attended by the academic community and guests representing pharmacy faculties from the Czech and the Slovak Republic. On this occasion, Dean David Vetchý awarded a silver commemorative medal of merit to thirty prominent figures from the Faculty of Pharmacy.

Photo: The former emblem of the Faculty of Pharmacy, previously a part of the University of Veterinary and Pharmaceutical Sciences Brno

Faculty of Economics and Administration

3,898
applications submitted

2,833
students in total

654
students from Slovakia

194
students from abroad
(outside Slovakia)

709
graduates

175
employees (FTE)

3
international research projects

In 2021, teaching in new **professionally-oriented Bachelor’s degree programmes** available in combined form was launched at the FEA. The faculty further promoted measures to reduce student dropout, which included assessing and supporting the work of programme consultants. The successful cooperation in lifelong learning with partner organisations (e.g. Generali Česká pojišťovna, a.s. of the Czech National Bank) continued with the creation of additional sets of comprehensive courses. In response to the unfavourable pandemic situation, the lifelong learning courses were successfully transferred to the online environment and the faculty took steps towards the creation of a long-term lifelong learning strategy.

The faculty responded to the changes in teaching caused by the pandemic by a major reinforcement of online teaching, including the appropriate tools, which was much appreciated by students in a faculty survey in 2021. The overall digitization of teaching also involved the introduction of Final State Examination (FSE) digital reports. Despite the need to use the online environment, the verification of the **new form of the FSE** in Bachelor’s and follow-up Master’s studies took place, making the defence of the final thesis and a broader discussion on the chosen topic the core of the FSE.

In the area of **cooperation with secondary schools**, in 2021 the faculty fully implemented the prepared *Conception for Cooperation with Secondary Schools*, which is built to a large extent on faculty ambassadors. The faculty continued the **Touch Econ** project, giving third and fourth year secondary school students the opportunity to study selected subjects at the faculty and get familiar with university life, as well as the **Seminar of Economic Brains**, which gives those who successfully complete it the certainty of admission without entrance examinations.

MU students were again offered practically-oriented **development workshops** with companies such as KPMG, Deloitte or IBM within the **TopSeC** programme (Top Students Centre), despite the need to hold some of the activities online.

The **increase of interest of international applicants** in the accredited degree programmes further strengthened the international environment at the faculty. Unlike in 2020, most placements abroad were able to commence without restrictions. In 2021, teaching of English-language Bachelor’s degree programmes was also launched at the faculty. In line with the general support of internationalization at the faculty, including the support of student and employee mobility, an assessment of the existing Erasmus contracts was performed and new contracts with top-level workplaces abroad were signed.

In doctoral studies, in 2021 the faculty managed to finalize the setting of comparable conditions of the admission of students in Czech and English language doctoral degree programmes and create a system of **tools supporting the completion of doctoral studies in the 4+1 period**, such as through specific research projects. In 2021, the faculty continued the implementation of the projects within the H2020 framework programme, including projects featuring a significant element of cooperation with large industrial concerns (such as the Gorenje Group). The four projects within the Horizon Europe were submitted. The faculty also managed to gain support for its scientific projects with a major application impact – for example the **Monitoring and Measures to Improve Air Quality in Brno**.

In 2021, the faculty took further steps concerning its membership in organizations with an active approach to **Corporate Social Responsibility** and supported the involvement of students and employees in the activities of the **MUNI HELPS** volunteering centre.

In 2021, the faculty also managed to finish all the steps to acquire the prestigious European **HR Award**, which was awarded in April 2021.



THE FACULTY CELEBRATES 30 YEARS OF EXISTENCE

In 2021, the Faculty of Economics and Administration celebrated the 30th anniversary of its founding. The FEA was the first post-Velvet Revolution MU faculty to be founded in 1991 and today it provides an education in economics to nearly 3,000 students. The 30th anniversary celebrations culminated in the September conference entitled the *Past, Present and Future, or Transformations of Economy, Labour Market and Educational Institutions*. The opening speech was delivered by Czech economist and co-founder of CERGE-EI, Jan Švejnar, who teaches at Columbia University in New York. The main ideas of the conference also discussed by the other panellists concerned the issues of change and transformation – whether of the requirements for graduates of economic faculties or the labour market as a whole. The conference took place in a hybrid mode – over 300 attendees were present in person, and additionally more than 600 visitors watched the event online.

Photo: Annual Conference of the Faculty of Economics and Administration, where the keynote speech was delivered by Jan Švejnar

Faculty of Informatics

In 2021, two **new degree programmes** – **Cybersecurity** (Bachelor’s programme) and **Software Engineering** (follow-up Master’s programme), accredited in the previous year within the FI portfolio, kicked off successfully. The doctoral studies courses were converted into the new *Computer Science* doctoral programme with specialisations in *Fundamentals of Computer Science* and *Computing Technology and Methodology*.

Teaching in English at the faculty is currently offered in three follow-up Master’s programmes and the numbers of international applicants interested in the studies are growing fast. **Roughly half of all the students write their thesis in a foreign language.**

In 2021, the Faculty of Informatics was the best evaluated MU faculty in the **M17+ evaluation by the International Panel**. Faculty researchers continued investigating numerous research projects and assignments. Three academics and one team from the FI received the *MUNI Innovation Awards*. A team led by Jan Strejček won the **MemSafety and SoftwareSystems** categories in the SV-COMP 2021 worldwide competition on software verification.

Antonín Kučera was granted a **new US Army research project** entitled *Models, Algorithms, and Tools for Solving Adversarial Security Problems*. Other academics acquired interdisciplinary GAMU grants and ministerial research projects. Professor Daniel Král **successfully finished the investigation of the ERC Consolidator grant** at the FI in 2021. Jan Bouda was appointed Czech representative for the European quantum communication infrastructure and other FI researchers are major contributors to the **Brno.AI** platform. PhD student Samuel Pastva won the **national Joseph Fourier Award** for computer sciences in 2021.

From 2021, doctoral students in English-language programmes at the FI are also entitled to a subsidy scholarship, which is positively reflected in the increase of interest. The office of **ombudsman for doctoral students** was established. In connection with the COVID restrictions, the use of the **online mode for defences and FSEs** increased, which has a positive influence on more frequent participation of international experts in committees.

The number of people who have completed at least one degree programme at the Faculty of Informatics throughout its existence exceeds 5,000 and the number of the diplomas issued exceeds 8,000. The faculty maintains long-term relationships with its graduates via a **LinkedIn faculty group** where it posts a summary of the latest faculty and MU events. Successful alumni and their stories are featured in the bilingual **Alumni Gallery** on the faculty website.

The faculty maintains regular contact with some **25 secondary schools** in the region via computer science teachers. The secondary schools receive a bimonthly **newsletter with faculty news** and lectures and events offered for those with IT talents. In 2021, some 1,500 talented students were addressed from among successful participants in Olympiads, IT contests and technical SPA at 500 schools in the Czech Republic and 200 schools in Slovakia.

In 2021, the faculty organized a **wide range of activities for secondary school students** with the aim to promote their interest in education and research in computer science and related disciplines. Many educational activities were launched for secondary school students leading to the deepening of their computational thinking and knowledge of information technologies, including programming in **Python, JavaScript, C/C++**, development of Embedded Systems or advanced education in cybersecurity. In total, **over 1,000 students and more than 70 lecturers and volunteers** from among the faculty academic staff and students were involved in these activities.

The long-term cooperation with industrial partners continued as well. In 2021, there were **27 companies** involved in the **Association of Industrial Partners (AIP)**, which contributed to the organization of many activities facilitating collaboration between the academic community, students and firms. In collaboration with the AIP firms, **78 Bachelor’s and Master’s theses** were successfully defended.

1,960
applications submitted

2,199
students in total

1,034
students from Slovakia

115
students from abroad
(outside Slovakia)

372
graduates

230
employees (FTE)

4
international research projects



WANTING TO HAVE MORE FEMALE STUDENTS AT THE FACULTY, THE FI ORGANIZED AN INTERNATIONAL CONFERENCE

The numbers of women in IT are growing – at the Faculty of Informatics, women make up almost 20% of students and this figure increases every year. But, the proportion continues to be low compared to other faculties. For this reason, the FI cooperates with the Czechitas organization, who organized an IT Summer School for secondary school girls at the faculty premises and whose mission is to popularize IT professions among women. One of those who try to make IT studies more accessible is faculty Vice-dean Barbora Bůhnová, who was at the founding of Czechitas organization and who was a patron of the *ACM Celebration of Women in Computing: womENCourage 2021* international conference. The conference welcomed 20 speakers from around the world, mostly prominent women in IT. Together with her colleague Pavel Zezula, Barbora Bůhnová was listed among the 2021 TOP IT personalities by the *Computerworld* magazine.

Photo: Barbora Bůhnová, Vice-dean of the Faculty of Informatics, who is committed to increasing the attractiveness of informatics among women

Faculty of Social Studies

4,776
applications submitted

3,232
students in total

458
students from Slovakia

311
students from abroad
(outside Slovakia)

697
graduates

252
employees (FTE)

11
international research projects

A key success in 2021 at the Faculty of Social Studies was the **smooth progress of online teaching**, including examinations and state examinations, which was also positively evaluated by students in course opinion polls. At the end of April 2021, the faculty received the **HR Award certificate**, which represents another milestone in improving the quality of the working conditions of employees.

The faculty also focused on expanding its portfolio of English-language courses taught by Czech as well as visiting teachers from abroad. In 2021, a total of **441 English-language courses** were taught at the faculty. Two new **interdisciplinary English-language Bachelor’s degree programmes** were successfully accredited – the *Global Challenges: Society, Politics, Environment* programme and the *Politics, Media and Communication* programme. The faculty further developed the idea of student ambassadors for each foreign language degree programme, aiming to increase awareness among students.

The interest in studies increased in 2021. The numbers of applications for studies at the faculty increased, as did the numbers of newly enrolled students, while the admission requirements remained unchanged. With a view to higher capacity requirements, the number of the rooms for seminars was increased in 2021.

In lifelong learning, the faculty focused primarily on **autumn and winter schools for secondary school students** (the *Winter School of Social Anthropology*, the *Autumn School of Contemporary European Politics*, the *Winter School of International Relations*, the *Autumn School of Social Work*, the *Autumn School of Public and Social Policy*, and the *Winter School of Sociology*).

The faculty actively tackles the causes of student dropout. In 2021, the FSS also pilot tested and fine-tuned a **new application for the prevention of study risks**, in which it intensively dealt with the possibilities of student dropout prevention through IS MU settings.

As regards research, the **10 projects** supported under the **GACR** grant competition were a major and unprecedented success for the faculty. In external grant competitions, FSS researchers obtained funds worth of 74 million CZK. In 2021, **277 publications** are dedicated to the FSS, of which 70% in the WoS/Scopus. Of all the faculty’s WoS publications, **62%** were published in **Q1 / Q2**.

A major achievement for Hana Macháčková was the shortlisting of her *ERC Starting* grant application for the second round of the selection procedure. Three FSS workers obtained the **Fulbright Scholarship** in 2021. The faculty also introduced the **standard of minimal requirements** for PhD students’ publications.

The Faculty of Social Studies does not want to be only an educational and research institution – it also wishes to be **active socially** and have the appropriate impact. These efforts are also clearly evident from the participation of employees and students in publicly beneficial projects or the wide range of their popularization activities. This can be illustrated by the *Back to Life* information campaign, organized by Helping Hands alongside the FSS and the city of Brno with the aim to debunk myths about vaccines. FSS students created the *(S)dělení lidu* documentary, mapping the voters of Czech political parties, which had its premiere ceremony on 28 October at the Scala University Cinema and in which they offered an interesting reflection on a nation-wide topic.

A separate **scholarship programme** has been launched at the FSS to **support associations** mainly in the organization of discussions, lectures, exhibitions, theatre performances or cultural and environmental events. FSS students were also involved in the MUNI HELPS volunteer centre. During the pandemic 14% of students volunteered for this activity.



SOCIALLY BENEFICIAL PROJECTS FAKESCAPE AND SYMBIOS RECEIVE INTERNATIONAL AWARDS

The Faculty of Social Studies is a place where very successful projects with a strong social impact have been created in recent years. In 2021, the prestigious *Charlemagne Youth Prize* was given to the *Fakescape* project – an escape game created by political science students that teaches students media literacy and critical. The prize has been awarded since 2008 by the European Parliament and the International Charlemagne Prize Foundation in Aachen. The *Symbios* project, offering shared housing to young adults from children's homes and students of Brno universities, also originated at the FSS. An international jury granted the project the prestigious *Sozial-Marie Central European prize* for 2021, which is the oldest prize for social innovation in Europe. *Symbios* is the result of the efforts of a team from the FSS Department of Environmental Studies led by project guarantor Bohuslav Binka.

Photo: Tereza Kráčmarová, founder of the Fakescape project, took over the Charlemagne Youth Prize

Faculty of Sports Studies

2,854
applications submitted

1,489
students in total

127
students from Slovakia

6
students from abroad
(outside Slovakia)

384
graduates

107
employees (FTE)

2
international research projects

A major achievement, and commitment at the same time, in personnel policy for the Faculty of Sports Studies in 2021 was the **HR Award**.

In 2021, the faculty also focused on wider popularization of its research activities. Under the **MUNI Trends** brand, it also started to regularly present the results of faculty research in sports on its website. In a clear form, the website publishes findings concerning diet, sports activities of children or recommended physical activities during various illnesses.

Due to the pandemic, changes in entrance examinations were made and their scope modified – the theoretical part of the entrance examination in the form of subject tests was carried out in a standard manner, while the practical part was limited to the necessary minimum. Talented students and those who represented the Czech Republic in Olympic disciplines could apply for a waiver of the entrance exam; 53 applicants were eligible for the waiver.

The Lifelong Learning Centre expanded its portfolio with new **e-courses for the public** (*First Aid, Sports Nutrition, Power Yoga for Beginners, Pilates for Beginners, Essentials of Core Stabilization and Support of Limbs as Basis for Correct Movement Patterns, and Parkour – Basic Movements and their Use*). Over the course of the year, several blocks of training for coaches of rhythmic gymnastics licence level 2 and 3 were implemented.

In 2021, the faculty organized the **Alumni Meeting**, at which primary and secondary school teachers presented the topic of *Teaching during the COVID-19 pandemic*. The thematic page **Methodological Materials for Primary and Secondary School Teachers** was added to the FSpS website.

31 students and five academics travelled abroad in the mobility programmes. 51 international students completed a study placement at the FSpS. Through online mobility, four employees of international universities completed a teaching or study period at the faculty. Two new **COIL courses** were implemented in collaboration with universities abroad.

In science and research, two **TACR** projects were successfully finalized and a **GACR** project and **KOSP** project (funded by the Ministry of Defence of the Czech Republic) were received for the next period. A major step forward is the progressive increase of articles authored by faculty staff published in Q1 and Q2 of the Web of Science. Czech and international staff of the **Incubator of Kinanthropology Research** are becoming the central driving force of research activities.

The faculty was a coordinator of an international project supported under the Erasmus+ Strategic Partnerships programme and participated in another one as a partner. Another excellent achievement is the **MUNI Innovation Award** that went to Miriam Kalichová and Petr Hedbávný for the development of equipment used in artistic gymnastics.

In doctoral studies, the admissions procedure was modified (a specialized English reading comprehension part was added). A new scholarship programme was created, supporting doctoral student placements abroad, primarily placements longer than one month.

In the first half of 2021, a *Memorandum of Cooperation* was signed with companies including STAREZ, Emilova sportovní and Lezecká asociace nezávislých odborníků. Cooperation with the Masaryk Memorial Cancer Institute and the Brno-Bohunice district was also extended.

The faculty's outpatient clinics of **sports medicine and physical therapy** performed **more than 1,300 examinations**. FSpS staff and students were also involved in the activities of the MUNI HELPS volunteer centre and in help for the tornado-stricken villages.

In 2021, the faculty continued project preparation work for the **completion of an unfinished sports infrastructure** (the MUNI Sports ground in the UCB) and the implementation of the reconstruction of the existing sports infrastructure (the Veslařská sports grounds).



THE FACULTY FINISHED THE KIDMOVE INTERNATIONAL PROJECT AND IS NOW SHARING GOOD COACHING PRACTICES

The Faculty of Sports Studies finished the two-year KidMove international project, which was to make a collection of proven coaching methods that may help prevent child dropout from sports clubs. Nine educational institutions and sports clubs from Finland, Austria, the Netherlands, Poland and the Czech Republic were involved in the KidMove project. The Czech Republic was represented by FSs employees and the Bulldogs Brno floorball club coaches. Within the project, successfully used coaching methods were collected. The outcome is shared experience and practical skills of coaches, young athletes, their families and sports clubs. The latest studies show that thanks to coaching methods which are primarily centred on young athletes and their needs injuries may be prevented and children may be motivated to continue their sports activities.

Central European Institute of Technology

The Central European Institute of Technology (CEITEC) is a research consortium which has been contributing significantly for 10 years now to high quality results in basic research in the Czech Republic and competing well in comparison with international centres. CEITEC Masaryk university (CEITEC MU) is the biggest partner of the CEITEC consortium and also the flagship of Masaryk University. In 2021, its researchers worked on **170 research projects**, the results of which contributed again to a higher quality of human life and health. The success of the institute is the collective work of almost **500 employees from 35 countries**. In 2021, CEITEC celebrated 10 years of existence. Internationally renowned evolutionary biologist Pavel Tomančák has become the new director of the consortium.

In 2021, CEITEC MU researchers published **over 300 articles** in prestigious peer-reviewed scientific journals, of which more than half were in journals in the top 25% of professional periodicals in the world. A research **team led by Jiří Fajkus** published a scientific study in which they significantly expanded the range of organisms with known RNA subunit telomerase. Their ground-breaking study has provided entirely new insights into the evolution of key eukaryotic non-coding RNAs spanning more than a billion years back in time.

A research team of the CEITEC MU and St. Anne's University Hospital, led by **Šárka Pospíšilová**, clarified the clinical significance of mutations in a key tumour suppressor called TP53, which serves as a central defender of cells against cancer.

A team of plant geneticists, led by **Karel Říha** from CEITEC MU, recently discovered that proteins involved in RNA quality control play a much more complex role in the regulation of gene expression than previously thought. These new findings pave the way for the creation of crops with improved pest resistance.

Marek Mráz's research team proved that the short RNA molecule known as miR-29 coordinates the activation of the pathway causing aggression of malignant cells in chronic lymphocytic leukemia. This scientific study provides new information on the regulation of this pathway and could help improve the current therapeutic approaches to chronic lymphocytic leukemia.

A research group led by **Pavel Plevka** made new discoveries concerning the genome release mechanism of honeybee viruses. Research disproved the existing notions about the behaviour of honeybee viruses while infecting host cells.

The South Moravian Region Award for contribution to science was given to research group leader Jiří Fajkus, who is an internationally recognized expert in telomere biology. **Jiří Fajkus** was also elected **member of the prestigious European Molecular Biology Association EMBO**, which makes him one of the world's leaders in research.

CEITEC MU also coordinates the **international Alliance4Life partnership**, which aims to improve the strategic management of research institutions in life sciences and to contribute to significant positive changes at the national level. CEITEC MU also partnered with the **international EU-LIFE consortium** of 15 leading European biomedical research institutions.

The institute is a proud holder of the **HR Award**; in 2019 it was the second economic unit of Masaryk University to receive it.

394

total staff (FTE)

77

employees from abroad
(outside Slovakia)

25

international research projects

345

scientific publications published



CEITEC WINS AWARDS FOR EQUAL OPPORTUNITIES AND FOR WOMEN IN SCIENCE

The CEITEC MU ranked high in the national *Company of the Year: Equal Opportunities 2020* competition, and thus became the very first research institution in the Czech Republic to occupy one of the leading positions. The award has been announced annually since 2004 by the Gender Studies civic association. The main topic of the 13th year, announced in June 2021, was maternity and parental leave management and flexible forms of work with special attention to the comparison of the situation before and during the COVID-19 pandemic. The CEITEC MU secured the second place also thanks to an increase in the numbers of women in senior positions. An important global award went to CEITEC MU cytogeneticist Terezie Mandáková. She is the winner of the L'Oréal-UNESCO For Women in Science competition, which helps women scientists create better working conditions. She received the award for her project investigating the structure of the *Boechera* plant genome.

Photo: Terezie Mandáková, award-winning scientist from CEITEC MU

Institute of Computer Science

The Institute of Computer Science is a central university unit with dual responsibility for application-oriented research in information technologies and care for the university-wide infrastructure and related IT services. Research focuses primarily on two complementary areas - the development and use of e-infrastructures and cybersecurity - and guarantees cutting-edge expertise for MU's information infrastructure. In 2021, the ICS received the **HR Award** and kicked off the implementation of the prepared action plan.

The ongoing support of the university's activities in an environment where physical interaction was restricted by the pandemic measures over the entire year was very significant in 2021. The fully remote or hybrid mode of work and teaching required further development and deployment of the **Microsoft Office 365** tools and continuation of the support of online teaching and examination methodologies, as well as training in efficient use of these tools in routine activities. The **Prevention application in INET** was also continually developed and modified as per current instructions, which made keeping records of testing, including employees who tested who positive, vaccinations and the fulfilment of the O-N-T principles in a virtually fully automated mode much easier.

The pandemic and the transfer of activities of the university and other units to cyberspace also increased the need for cybersecurity at the university, which is ensured by the **internationally certified CSIRT-MU team**. The ICS also coordinated the collaboration of all the higher education institutions within the **CRP-KYBER21** project, aiming to increase the security of the M365 environment. The extensive e-learning five module *Cybersecurity Course* was also created, both in Czech as well as in English.

The cooperation with state security services, primarily the NCISA, continued. The OP RDE project **Czech CyberCrime Centre of Excellence (C4E)**, which integrates information security with legal and sociological aspects through the involvement of the FI and the FLaw, provides a top research environment in cybersecurity.

The ICS's infrastructural orientation is primarily built on its direct integration in two large research infrastructures and intensive collaboration with others. The CERIT-SC centre at the ICS is part of the national **e-INFRA CZ** e-infrastructure and is also directly integrated in the large **ELIXIR CZ research infrastructure**. In both cases, the national level involvement is complemented by participation in key H2020 projects, namely *EOSC Future* and *EOSC-Life*. In the second project, MU is the provider of the *Life Science AAI* authentication and authorisation infrastructure for the entire field of life sciences and medicine within the EU.

In 2021, the ICS Director became the **head of the ELIXIR CZ Board** and a representative of the Czech Republic in the analogous body of the ELIXIR infrastructure at the European level. Through its involvement in the RECETOX research infrastructure, the ICS has also become part of the **ESFRI infrastructure** through the newly included pan-European **EIRENE** project. Other infrastructures with which the ICS collaborates include the BBMRI and the CzechGlobe. The development of the **SensitiveCloud** infrastructure for storage and processing of sensitive data also continued.

The ICS further supported university-level **Open Science activities** by finalizing the proposal for the *MU OS Strategy*. At the national level, the ICS contributed by collaborating on the *Architecture of Implementing the EOSC in the Czech Republic* project (MEYS).

The preparation of the **integrated EOSC-CZ project** was launched. From 2023, it should provide the necessary facilities for the implementation of the EOSC and the *FAIR data* principles, primarily through the establishment of the *EOSC-CZ Secretariat* and creation and operation of the *National Metadata Directorate* as a key component of the future *National Data Infrastructure of the Czech Republic*.

150

total staff (FTE)

147,949

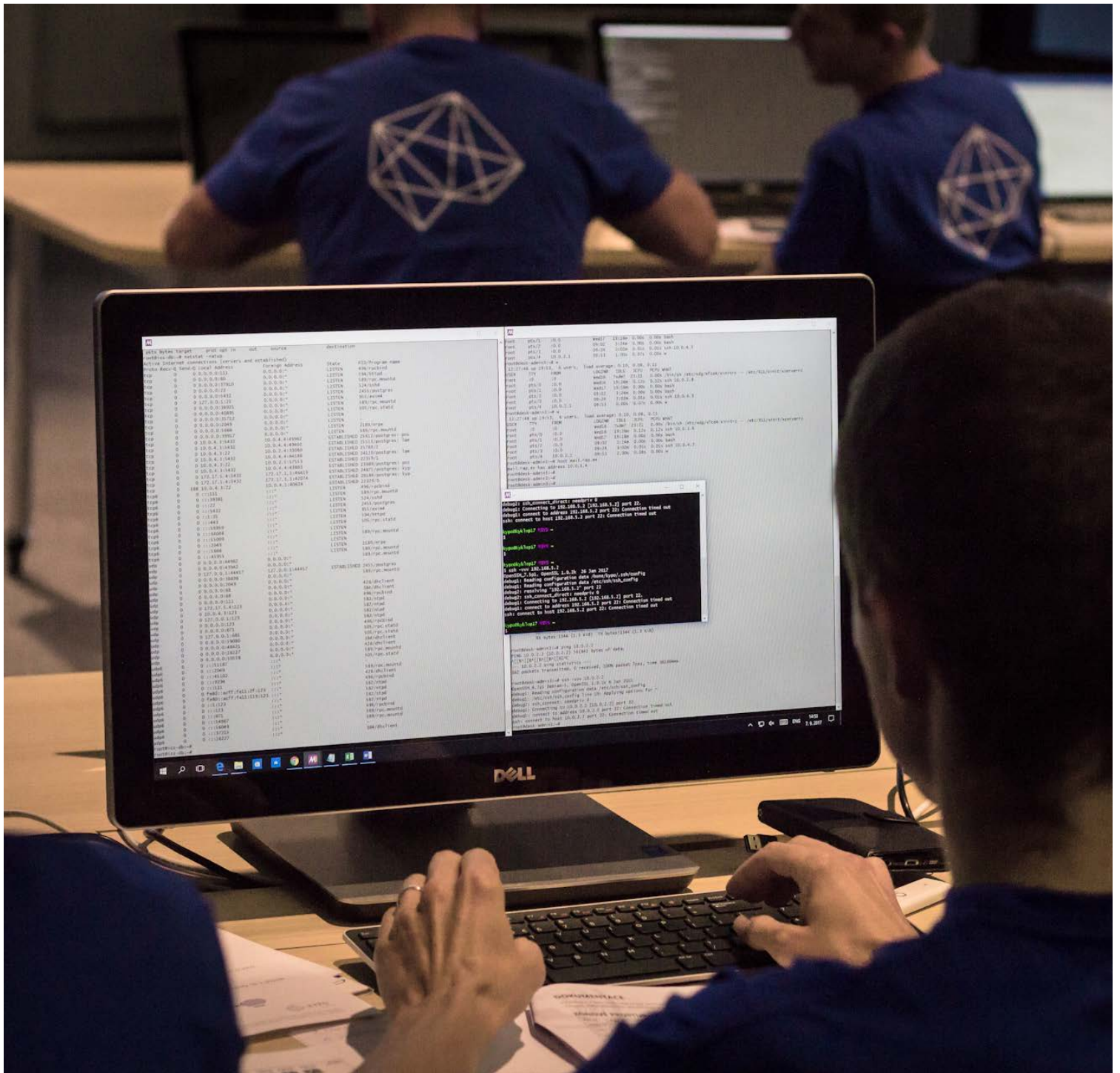
cyber-attacks averted

10

international research projects

45

scientific publications published



THE CYBERNETIC PROVING GROUND PROVIDE SECURITY SOFTWARE FOR FREE, WHICH AWARDED EUROPEAN COMMISSION

Cybercrime is on the rise, but cybersecurity experts are scarce. For this reason IT specialists from the Cybernetic Proving Ground decided to release the unique KYPO CRP security platform for free use. Now anyone can freely download, modify and further distribute the KYPO CRP as open-source security software. Its original developers are ready to provide consultations, training and other services to all potential users. This unusual approach to the software also caught the attention of the jury of the European Commission's Innovation Radar competition, in which the KYPO CRP won the Disruptive Technologies category, intended for technologies with the potential to significantly impact the entire field. The Cybernetic Proving Ground is a training platform where people may prepare for cybernetic threats.

MU Organizational Structure

Masaryk University

MU

Rector's Office

RMU

Žerotínovo nám. 617/9, 601 77 Brno, Česká republika, www.muni.cz

Žerotínovo nám. 617/9, 601 77 Brno

Faculties

**Faculty
of Law**

FLaw

Veveří 158/70, 611 80 Brno

**Faculty
of Medicine**

FMed

Kamenice 753/5, 625 00 Brno

**Faculty
of Science**

FSci

Kotlářská 267/2, 611 37 Brno

**Faculty
of Arts**

FA

Arna Nováka 1/1, 602 00 Brno

**Faculty
of Education**

FEdu

Poříčí 623/7, 603 00 Brno

**Faculty
of Pharmacy**

FPharm

Palackého třída 1946/1, 612 00 Brno

**Faculty of Economics
and Administration**

FEA

Lipová 507/41a, 602 00 Brno

**Faculty
of Informatics**

FI

Botanická 554/68a, 602 00 Brno

**Faculty
of Social Studies**

FSS

Joštova 218/10, 602 00 Brno

**Faculty
of Sports Studies**

FSpS

Kamenice 753/5, 625 00 Brno

University Institutes

**Institute
of Computer Science** ICS

Botanická 554/68a, 602 00 Brno

**Central European
Institute of
Technology** CEITEC

Kamenice 753/5, 625 00 Brno

University Facilities

**Language
Centre** LC

Komenského nám. 220/2,
662 43 Brno

**Masaryk University
Archives**

Žerotínovo nám. 449/3,
602 00 Brno

**Centre for International
Cooperation** CIC

Komenského nám. 220/2,
662 43 Brno

**Support Centre for Students with
Special Needs (Teiresiás)**

Komenského nám. 220/2,
662 43 Brno

**Technology Transfer
Office** TTO

Komenského nám. 220/2,
662 43 Brno

**Mendel
Museum**

Mendlovo náměstí 907/1a,
603 00 Brno

**University Centre
Telč** UCT

Náměstí Zachariáše z Hradce 2,
588 56 Telč

**Accommodation and
Catering Services** ACS

Vinařská 471/5a, 603 00 Brno

**Masaryk University Press
(Munipress)**

Rybškova 987/19, 602 00 Brno

**Management of the
University Campus
at Bohunice** MUCB

Kamenice 753/5, 625 00 Brno

Career Centre CC

Komenského nám. 220/2, 662 43 Brno

**Pedagogical Competence
Development Centre** CERPEK

Komenského nám. 220/2, 662 43 Brno

List of Abbreviations

University

AS MU	Masaryk University Academic Senate	FMed	Faculty of Medicine
BBMRIbm	Biobanking and Biomolecular Resources Research Infrastructure	MIMSA	Association of International Medical Students at Masaryk University
C4E	CyberCrime Centre of Excellence	MU	Masaryk University
CEITEC	Central European Institute of Technology	MUST week	Masaryk University Staff Training Week
CERIT-SC	Centre for Education, Research and Innovation in ICT	FEdu	Faculty of Education
CERPEK	Pedagogical Competence Development Centre	P-Pool	Undergraduate programme for motivated medical students
LC	Language Centre	FLaw	Faculty of Law
CSIRT-MU	Computer Security Incident Response Team	FSci	Faculty of Science
TTO	Technology Transfer Office	RECETOX	Research Centre for Toxic Compounds in the Environment
CIC	Centre for International Cooperation	RMU	Masaryk University's Rector's Office
LL	Lifelong learning	IEB	Internal Evaluation Board
EDUC	European Digital UniverCity (consortium of universities)	SIMU+	Strategic Investments of Masaryk University in Education
EIRENE	European Environmental Exposure Assessment Network, project coordinated by MU	ACS	Accommodation and Catering Services
ECR	Ethics Committee for Research	AIP	Association of Industrial Partners
FEA	Faculty of Economics and Administration	SCSSN	Support Centre for Students with Special Needs (Teiresiás)
FPharm	Faculty of Pharmacy	BT MU	Board of Trustees of Masaryk University
FA	Faculty of Arts	MUCB	Management of the University Campus at Bohunice
FI	Faculty of Informatics	SUPO	System of Payment of Claims
FSpS	Faculty of Sports Studies	FSE	Final state examination
FSS	Faculty of Social Studies	TopSeC	Top Students Centre
GAMU	Grant Agency of Masaryk University	LPT	Learning potential test
GEP	Masaryk University Gender Equality Plan	U ₃ V	University of the Third Age
HR4MU	Human resources development and international research orientation at MU	UCT	University Centre Telč
IGA MU	Internal Grant Agency of Masaryk University	UCB	University Campus at Bohunice
INET	Enterprise resource planning system	ICS	Institute of Computer Science
IS MU	Masaryk University Information System	SB MU	Scientific Board of Masaryk University
MU ISAB	Masaryk University International Scientific Advisory Board	TII MUNI	Prospective Teachers' Training Improvement and Innovation at MUNI
ISO	International Staff Office		
CC	Career Centre		

Other

7. FP	Seventh Framework Programme	MEYS	Ministry of Education, Youth and Sports of the Czech Republic
AZV	Czech Health Research Council	MI	Ministry of Interior of the Czech Republic
COIL	Collaborative Online International Learning	MA	Ministry of Agriculture of the Czech Republic
CDP	Centralized development projects	NAKIT	National Agency for Communication and Information Technologies
CzechELib	National Centre for Electronic Information Resources	NCISA	National Cyber and Information Security Agency
CR	Czech Republic	OP JAK	Operational Programme Jan Amos Comenius
ECTS	European Credit Transfer System	OP RDE	Operational Programme Research, Development and Education
EIR	Electronic information resources	PF	Postdoctoral Fellowship
EMBO	European Molecular Biology Organization	RIV	Information Register of R&D results
EOSC	European Open Science Cloud	RDIC	Research, Development and Innovation Council
ERC	European Research Council	SDGs	Sustainable Development Goals
ESFRI	European Strategic Forum for Research Infrastructure	SR	Slovak Republic
EU	European Union	SSH	Social Sciences & Humanities
EULETA	European Legal English Teachers' Association	SS	Secondary school
FTE	Full Time Equivalent	STM	Science, Technology and Medicine
GACR	Czech Science Foundation	SPA	Students' Professional Activities
HE	higher education	TACR	Technology Agency of the Czech Republic
H2020	EU Research and Innovation Framework Programme	TB	Terabyte
IATEFL	International Association of Teachers of English as a Foreign Language	TGM	Tomáš Garrigue Masaryk
ICM	International Credit Mobility	UIN	University identification number
CIN	Company Identification Number	USA	United States of America
ISEP	International Student Exchange Programs	R&D	Research and Development
IT	Information technologies	BUT	Brno University of Technology
SMR	South Moravian Region	(P)U	(public) university
MENDELU	Mendel University in Brno	WoS	Web of Science
MC	Ministry of Culture of the Czech Republic	PS	Primary school
MSCA	Marie Skłodowska-Curie Actions		
MIT	Ministry of Industry and Trade of the Czech Republic		

**Annual Activity Report
Masaryk University 2021**

Published by Masaryk University, Žerotínovo nám. 617/9, 601 77 Brno

Editor: Šárka Řehořová, Strategy Office, MU Rector's Office

Content and editorial collaboration: Ivana Staveník, Martina Vidová, Mariya Sydoruk, Petra Čáčková

Translation: Lenka Bělková and František Rulík

Proofreading: Ailsa Randall

Production: Pavla Hudcová, Communication and External Relations Office, MU Rector's Office

Edition series design: Milan Katovský, Kateřina Katovská

Graphic design and DTP: Milan Katovský, Pavel Kotrla

Photo authors: Martin Indruch, Aleš Ležatka, Tomáš Hájek, Irina Matusevich, Ondřej Požár and archives of the MU faculties
1st edition, 2022

