BRNO UNIVERSITY OF TECHNOLOGY

ANNUAL REPORT

ON THE ACTIVITIES OF THE BRNO UNIVERSITY OF TECHNOLOGY IN 2015

Annual Report on the Activities of the Brno University of Technology in 2015

The Annual Report on the Activities of Brno University of Technology for the Year 2015 is presented in accordance with law no. 111/1998 Coll., on universities. It has been elaborated according to the framework curriculum of activities of the university for the year 2015 issued by the Ministry of Education, Youth and Sports. It concerns the data and substantial results of all activities related to the mission of Brno University of Technology in the scope of both Czech and international post-secondary education and offers a general public overview of the university's major scientific and research activities.

The Annual Report was approved by the Academic Senate of BUT on 3 May 2016.

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ANNUAL REPORT

ON THE ACTIVITIES OF THE BRNO UNIVERSITY OF TECHNOLOGY IN 2015

BRNO UNIVERSITY OF TECHNOLOGY


VYSOKÁ ŠKOLA
CHEMICKO-TECHNOLOGICKÁ
V PRAZE
VYSOKÉ UČENÍ
TECHNICKÉ
V BRNĚ
FAKULTA STROJNÍHO
INŽENÝRSTVÍ


I TY
SE MŮŽEŠ STÁT
DŮSTOJNÍKEM
Univerzita obrany
UNIVERZITA OBRANY
VYSOKÉ UČENÍ
TECHNICKÉ
V BRNĚ
The
BEST
Jdi na VUT
VYSOKÁ ŠKOLA
FINANČNÍ
Slezská univerzita v Opavě

CONTENT

1

INTRODUCTION

1.1 Introductory words of the rector

Last year at BUT can be characterized by the completion of the large and magnanimous constructions that were started in previous years. Due to the considerable financial costs of the completed buildings, their volume and the related costs from the university's resources, this year we adopted certain austerity measures, namely in rewarding employees and allocating resources to the faculties and other constituent parts of BUT.

At the same time, we completed the OP RDI projects, and prepared the Long-term Plan for the Years 2016–2020 and its update for 2016. We initiated organizational changes of the Rector's Office, which should result in the higher quality of services for the university faculties, institutions and employees. Furthermore, we aimed to reduce the administrative work load, especially that of our teaching staff. I suppose that after being discussed with the university constituent parts, these changes will also continue in the coming year.

The year 2015 can also be characterized as the year of increased transparency of the budgetary discussions in the Academic Senate of BUT. We went from using "dry lifeless" tables to "living interconnected" ones, which had been demanded by the faculties and constituent parts for several previous years; everyone now can see how the change of the performance in some of the indicators is reflected in the allocation of funds.

We are happy to state that the year 2015 has brought the slowdown of the construction, spatial and instrumental expansion of BUT. Now it is necessary to review in detail the use of the total space of our school and optimize it. Taking into consideration the demographic decline, the falling number of students financed by the Ministry of Education, reduction of funds, changing external conditions (e.g. the change of the Higher Education Act) and the new period of the OP RDE projects, I believe it is time to think more about the organization and content of degree programs and the quality of our teaching and research work.

Prof. MSc Petr Štěpánek, PhD
Rector of BUT

1.2 Significant events at BUT in 2015

Events

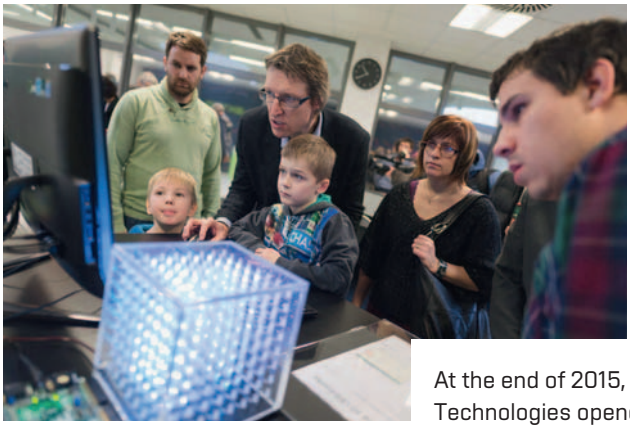
BUT participated significantly at the **World Expo in Milan, Italy**. Ondřej Chybík and Michal Krištof, the authors of the Czech pavilion, are the graduates of the Faculty of Architecture. BUT was presented by representatives of the Faculty of Chemistry, who showed the visitors, for example, macromolecular cuisine, or the award-winning HYDAL biotechnology, which also won a Technology Oscar (see Achievements and Awards).

After almost twenty years, Brno University of Technology adopted a new logo and **unified visual style.** The existing thin lines have been replaced by a bold T referring to "technology". The pronounced red-and-white visualization was created by ReDesign, aiming for a technical logo. The letter T suggests a masonry lintel or even the distribution of pixels in raster graphics. The new visual style enables individual faculties and constituent parts to employ the modular composing of logos.

ZPRÁVY zVUT.cz

Our University has started a news website **www.zvut.cz**, which provides information about current events at BUT. Its articles provide information about scientific discoveries, interviews with interesting university personalities, and notification of upcoming events. The website is visited around 10 000 times per month.

The building of the **European Technology Institute (CEITEC BUT)** in the Pod Palackého vrchem compound had its official building inspection at the end of 2015, completing the first part of the project. The new infrastructure will provide state of the art equipment and optimal conditions for basic and applied research, particularly in the field of material sciences and nanotechnologies.



The Institute of Forensic Engineering of BUT moved from its original premises at Údolní 244/53 Street into a new space at Purkyňova 464/118 Street in Brno in August. The extensive reconstruction was carried out to serve the Institute and the building was equipped with modern technology, necessary both for the functioning of the facility itself (HVAC, lighting, computer networks, etc.) and particularly for teaching and research (2 lecture halls, 8 classrooms and 2 laboratories).

At the end of 2015, the Faculty of Electrical Engineering and Communication Technologies opened the interactive playroom **Elektrikárium**. It makes a popular form of presenting electrical specializations to "potential clients" from the age of five. Visitors can try operating a rotogen, laser harp, or robotic soccer player.

In 2015, the Faculty of Business and Management (FBM) of BUT hosted the **Brno International Week**, a series of international lectures for the students of FBM, international sharing of experience in the field of education and quality assessment. There was also Brno Branding Week, a project aimed at specific marketing research; in addition to the participation of about thirty BUT students, there were also three foreign universities involved.

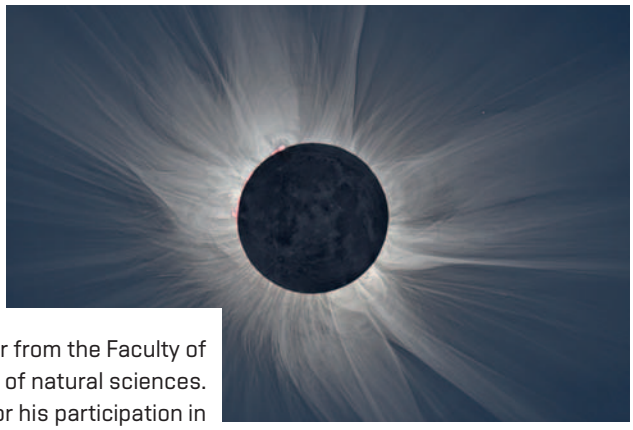
The counselling centre Over the Blocks, which helps BUT students cope with various disabilities, created the unique Technical Dictionary of Czech Sign Language. The dictionary helps students with hearing difficulties turn selected specific terms into signs, which previously could only be copied. The **Technical Dictionary of Czech Sign Language** currently offers three hundred entries of jargon from mathematics, statics, construction, geometry and graphics.

The Faculty of Information Technology organized the first edition of the highly successful conference **Excel@FIT**. It was a great presentation of student work, including discussions among students, academics and professionals from the IT field. Students gained valuable feedback from the commercial sector representatives, who often assign dissertation topics to students of the faculty.

After a seven-year break in tradition, the university dance balls were renewed in grand style. **The University Yule Ball**, held in the Boby Centre on December 3rd 2015, was visited by 1 500 visitors. Organized by a team of students of six faculties of BUT, this traditional social event has successfully returned into the calendar of BUT events.

Achievements and awards

President Miloš Zeman awarded Professor Armin Delong, BUT graduate, **the Medal of Merit in Science**. Professor Delong is one of the founders of electron microscopy in Czechoslovakia and one of the most important Brno scientists. Turning 90 in January 2015, BUT awarded him the honorary title of Associate Professor Honoris Causa in November 2014.



The City of Brno awarded Professor Miloslav Druckmüller from the Faculty of Mechanical Engineering of BUT for his contribution in the field of natural sciences. Professor Druckmüller earned the reward, among others, for his participation in successful expeditions to observe solar eclipses. During his eighth expedition on March 20, 2015, from Spitsbergen, he successfully documented a total solar eclipse, which lasted 147 seconds. The photographic image made on this expedition was published by NASA, among other bodies.

In March, the team of Professor Ivana Márová from the Faculty of Chemistry was awarded a **Technology Oscar** for technology for the microbial production of bio plastics derived from used cooking oil. HYDAL biotechnology is the only Czech technology which received the prestigious Frost & Sullivan Award – by a world renowned agency assessing the contribution of new knowledge for human development.

The team from the Institute of Theoretical and Experimental Electrical Engineering of FEEC of BUT earned the grand prize – **the Golden Ampere 2015** – for an exhibit called the Diagnostic System for the Detection and Localization of Partial Discharge (MOSAD-MST-PD). The faculty, in collaboration with the CVVOZE research centre, also succeeded at the competition **Entrepreneurial Project of the Year** with the Technology Park project of Professor List, winning 3rd place in the category Infrastructure to Support Innovative Enterprises.

Kristyna Smržová and Eva Horáková – graduates of the Faculty of Architecture, placed well at the competition **Young Architect Award 2015**. Smržová was awarded 1st prize and the associated CEGRA prize was given for her dissertation Railways – the Variable Space.

The Most Beautiful Czech Books of 2014 competition brought a number of major graphic design awards to **the designers of FFA of BUT**. Six publications, whose visual forms they created, obtained the highest merit. For example, Martin Pulicar, a recent graduate of Graphic Design Studio 1, won the Arno Sáňka Award for his publication Hic Sunt Leones. The publication was illustrated by Jiří Franta, an assistant of Studio Painting 2, winning in the category Books for Children and Youth.

The "smart wall" project, developed by the team of Associate Professor Ostrý from the Faculty of Civil Engineering, won the **Gold Medal IBF 2015** at the Building Fair. The "smart wall" accumulates heat when a room is overheated, conversely, releasing heat as the room cools down – the room is able to maintain a comfortable microclimate without large temperature fluctuations.

TU Brno Racing team reached 2nd place with their student formula Dragon 5 at Varano de Melegari. They gained 793 points in this prestigious European-level competition, bringing them to the podium for the first time. The team consists mainly of students of the Faculty of Mechanical Engineering, as well as representatives of the Faculty of Electrical Engineering and the Faculty of Business and Management of BUT.

Jitka Pešková, a student of the Faculty of Architecture and dedicated to skeet shooting, became the **Best Woman Athlete of BUT 2015**. She earned the Prize of the Centre of Sports Activities of BUT for her 1st place at the European Championships, 2nd place at the Championships in the individual women's race and 1st place in the women's team at the Summer Olympics in Gwangju.

The Critics Award for Young Painters 2015 was won by Eva Škrovinová, a Faculty of Fine Arts graduate. Michael Hunt, a student of Painting Studio 3, also scored in the competition by winning the hearts of the audience. The works of art of the finalists were displayed in the Adria Palace Gallery in Prague from February to March 2015.

Adam Michna, a student of the Faculty of Architecture of BUT, was awarded the main prize of the **Porotherm House in 2015** for his Housing in Clover. The competition hosted 56 architectural studies of houses. The 15th season of the competition culminated in March 2015 with a ceremony held at Czech Technical University in Prague.

Col. M.Sc. Leos Tržil, the Regional Director of the South Moravian Police Department, awarded BUT **the Plaque for Active Cooperation with the Regional Police**. The Institute of Forensic Engineering, for example, with its experts on traffic accident analyses or movable property evaluations, is a long-standing partner of the Regional Directorate.

Markéta Schiffnederová, a student of Sculpture Studio I of FFA BUT, won 1st place at the international **Art Limited** competition in Grenchen, Switzerland. The competition was aimed at art objects created by 3D printing technology. Schiffnederová was awarded for her work Crumpled – Rabbit, created from gypsum composite using 3D printing technology.

Anniversaries

Faculty of Mechanical Engineering of BUT celebrated the 115th anniversary of its founding in 2015. In addition to the gala evening at the Municipal Theatre of Brno, the faculty commemorated this anniversary throughout the whole year with a number of events: LEGO Competition, mechlab, sports tournament for the students and staff of FMI, and a MiniPoster Session.

The University of the 3rd Age (U3A) has been at BUT for 15 years, offering a three-year cycle of lectures for seniors, with the participation of all the faculties. During the first two years of study, students become familiar with the overall professional profile of the university and in the third they choose their specialization.

Fifty years have passed since the establishment of the Forensic Engineering unit of BUT's Rector's Office, and 45 years since the founding of the **Institute of Forensic Engineering** (IFE) as a body with university-wide jurisdiction. The IFE prepares experts to provide services in technical fields and offers continuing master's degree programs in Forensic Engineering and Risk Engineering.

In 2015 the Faculty of Civil Engineering celebrated **the 10th anniversary of the existence of architecture as a BUT specialization**. Many events were organized in connection with this celebration, such as the Profile ARC + 10 exhibition, the educational conferences Architectural Education – Between Art and Craft, and the 10th Beanie – the traditional baptism of freshmen, as well as the ArcMap exhibition.

1.3 Major projects of BUT

Central European Institute of Technology (CEITEC) of BUT

CEITEC is a joint project of six Brno universities and research institutions (BUT, Masaryk University, Mendel University Brno, University of Veterinary and Pharmaceutical Sciences, Institute of Physics of Materials of Academy of Sciences and Veterinary Research Institute), which together create Europe's leading scientific research centre specializing in the field of life sciences, advanced materials and technologies. The main goals are to build a major European centre of science and education and to offer top facilities and conditions to the best researchers. The implemented results improve the quality of human life and health.

The CEITEC project was launched in 2011 and its first phase was successfully completed in 2015, when the research infrastructure, including the installation of equipment, was finished. All monitoring indicators of the project were met and some of them, such as number of impacted articles or protected research and development results, have been significantly exceeded. CEITEC is entering its next phase with the approved five-year NPU II project named CEITEC 2020, whose grant funds should cover approximately one-third of the annual budget of the centre.

The CEITEC of BUT continues the trend of internationalization and commercial cooperation. It has started successful partnerships with prestigious foreign academic and research institutions and domestic and foreign industrial partners. This leads to a growing volume of contractual research and increasing numbers of European research projects (H2020). In 2015, CEITEC researchers applied for more than 20 grants through the H2020 scheme.

The major achievements of the international cooperation include the establishment of partnerships, research projects and high-quality publications. Contracts were signed with the University of Birmingham, University of Vienna and University of Sheffield, among others. Some interesting international cooperation projects launched in 2015 include OSEM-EV (Optimized and Systematic Energy Management in Electric Vehicles) and 3Ccar (Integrated Components for Complexity Control in Affordable electric cars), with the participation of researchers from the group of Professor Pavel Václavek, whose goal it is to make electric mobility cheaper, more effective and reliable.

The most significant publications of 2015 include the review article of Professor Jaroslav Pokluda on the calculation ideal strength and other mechanical properties of crystals of solids. The article was written in cooperation with two Brno co-authors (Miroslav Černý and Mojmir Šob) and a Japanese colleague (Yoshitaka Umeno); it was published in one of the most prestigious scientific journals in this area: Progress in Materials Science.

There were 19 students who enrolled in the first year of the inter-university doctoral study program of the CEITEC BUT. Twenty students are now studying in second year and 13 are in their third. In accordance with the strategy of admitting excellent candidates interested in science, CEITEC BUT has launched a recruitment campaign for its fourth academic year.

THE MAIN AIM IS TO BUILD AN IMPORTANT EUROPEAN CENTER OF SCIENCE AND EDUCATION, WITH TOP QUALITY INFRASTRUCTURE AND CONDITIONS FOR THE BEST SCIENTISTS.

IT4Innovations Centre of Excellence

Currently in operation, IT4Innovations is a unique project aimed at building a national centre of excellence in information technology. In 2015 its start-up phase was successfully completed, thus proceeding to the sustainability phase. This new centre strengthens the concentration of a wide range of disciplines related to information technologies. The start of the project was accompanied by the construction and equipping of the building at the premises of the Faculty of Information Technology of BUT. The building was completed in 2013. New employees were hired within the start-up project and the project itself met the monitoring indicators according to plan.

To implement IT4Innovations, the faculty established its own Research Centre of Information Technology, which is housed in a new building. The Centre integrates both human and spatial capacity and equipment suitable for such activity. The building is ready for high-quality applied research and development. Its proximity to other areas of the faculty, thus academic staff and students, gives the Centre access to expertise and the possibility of synergy between the academic and commercial spheres. Ready for cooperation with external bodies due to its capacity, the Centre has established contractual cooperation with renowned companies such as Red Hat and CZ.NIC. Cooperation on joint research projects with FIT is preferred and the project is expected to be partially funded on the basis of this cooperation. A large part will be funded by the National Program of Sustainability II, which the Centre has received for the period 2016–2020.

THE NEWLY BUILT CENTRE HAS INCREASED THE CONCENTRATION OF THE MANY OFFERED DISCIPLINES RELATED TO INFORMATION TECHNOLOGY.

Centre of New Technologies for Mechanical Engineering (NETME Centre)

During the five years of its existence, NETME has become a modern research and development facility with a direct link to the applied sphere. The Centre cooperates with major universities and companies from the Czech Republic and abroad. It has established extraordinary cooperation with industry, such as its development and sale in 2015 of a comprehensive measurement system for a Japanese partner. It has significantly reduced the production costs for the iron processing industry through joint research, which is valued at several million CZK.

The NETME Centre successfully acquires and maintains contacts with companies outside the Czech Republic, this being almost 40% of the contractual research volume. This cooperation is based on the long-term successful activities of a number of research teams of the Faculty of Mechanical Engineering and their excellent equipment, including a unique electron beam, an advanced laboratory of 3D printing, the virtual design of machinery and equipment, and a fully equipped climate chamber for automotive industry needs.

The development of the NETME Centre continued in 2015, and thanks to the support of the National Program for Sustainability, it achieved significant advances in both basic and applied research. The Design and Development Office has been strengthened: it has persistently concentrated on the acquisition of both targeted support and foreign contractual research so that the research teams can fully concentrate on scientific work. These organizational changes have also contributed to the improvement of the long-term research of the Centre. In 2015, the research teams participated in seven international and 62 national projects, amounting to over 200 million CZK. The research of the NETME Centre is focused primarily on those fields of engineering that are brought by the social challenges of today. NETME Centre would like to play a significant role in the Czech industrial environment and concentrate particularly on the areas of transport, sustainable energy, aviation and Industry 4.

Advanced Materials, Structures and Technologies (AdMaS) Research Centre

AdMaS is a modern scientific centre and a comprehensive research institution in the field of construction, which is a part of the Faculty of Civil Engineering. It focuses on the research, development and application of advanced building materials, structures and technologies. Its scope goes beyond the construction sector, which is evidenced by the research targeted at transport systems and the infrastructure of towns and villages.

The AdMaS research centre was successfully completed on 31st December 2014, after four years of construction. The Centre has completed the first year of full-scale operation at its new site at Purkyňova 139 Street. In 2014, the Centre received a five-year grant of 143 million CZK from the National Programme for Sustainability. In the summer of 2015, the Centre succeeded in a call for additional instrumentation from the Operational Program Research and Development for Innovations. The AdMaS project Strengthening Research Capacity achieved 95 points out of 26 assessed and took 1st–4th places in terms of factual assessment. The total volume of received funds amounted to 27.5 million CZK.

In 2015, all monitoring indicators were met and the planned annual values were exceeded virtually in all cases. The national grants reached a final amount of 56.11 million CZK and that of contracted research for 39.71 million CZK. The most important partners from the application sphere in the sector of transportation projects included the Directorate of Highways and Expressways, Railway Infrastructure Administration and selected administrative and management bodies for regional roads. In the field of geo-informatics, the Centre has successfully developed cooperation with the important German geodetic company Hansa Luftbild AG. Robert Bosch and Redrock Construction are among the key partners in the field of materials research.

The Research Centre team carried out a comprehensive evaluation of the effectiveness of public investments into the development of waterway infrastructure suitable for inland freight transport in the Czech Republic. This reference contract is interesting from the future perspective. Generally, cooperation with industry has developed significantly, and the Centre's turnover in the area of contractual research has multiplied. It is favourable that all areas of the Research Centre are involved in contractual research and its individual projects are related to a number of customers. Its activities are diversified more broadly, which makes the prosperity of the Centre less dependent on a limited number of several key partners.

THE ADMAS CENTRE FOCUSES ON RESEARCH, DEVELOPMENT AND THE APPLICATION OF ADVANCED BUILDING MATERIALS, CONSTRUCTION AND TECHNOLOGY.

Materials Research Centre (MRC)

The year 2015 was very successful for the MRC, as the Centre cooperated with 48 companies and the year-on-year volume of contractual research grew by 60%; the volume of grants more than doubled. HYDAL biotechnology, developed in the Centre and commercialized in collaboration with the NAFIGATE Corporation, won the prestigious Frost & Sullivan Technology Innovation Award in March 2015. This technology was also presented at the World Expo in Milan. Following the original technology, the Centre focuses on processing bioplastics.

Research on the secondary use of fly ash has also developed quickly. MRC has recently started cooperation with ECOBA (an association of producers and processors of ash in the EU). The Laboratory of Metals and Corrosion, the first Czech university lab of such specialization, acquired the certificate of quality management ISO 9001: 2008.

Centre of Sensor, Information and Communication Systems (SIX)

The SIX Centre was established in 2010 as a joint initiative of the departments of the Faculty of Electrical Engineering and Communication Technologies engaged in the research and development of sensory systems, information and communication technologies. The aim of this initiative was to interconnect the shared research interests of the institutes and apply their synergy to large, complex research projects.

The individual departments provided the SIX Centre with their research laboratories. In 2011–2013, the laboratory equipment was modernized and significantly extended thanks to the financial support from the Operational Program Research and Development for Innovations. The year 2014 was the first year of the Centre's full operation without direct financial support from public sources. Despite the lack of direct support, the SIX Centre increased both the numbers of its staff and their FTE-time jobs, as well as the number of professional outlets and the volume of grants and commercial contracts. In 2015 the Centre continued its expansion.

Since 2015, the SIX Centre has been supported by the National Sustainability Program project Interdisciplinary Research of Wireless Technologies (INWITE). The aim of the project is to develop the quantity and quality of basic research and increase the ambition of the Centre in applied and commercial research. The professional objectives of the project are implemented by a team of five working groups, supervised jointly by the professors of the Technical University of Vienna and the SIX Centre.

The same team of five working groups, with close ties to the Technical University of Vienna, succeeded in the first phase of the program Horizon 2020 Widespread Teaming and is continuing with 31 applicants for the second phase of the project, which is supposed to last up to seven years. The strategy of the Centre, in cooperation with Technical University in Vienna, will be crucial for the success of the project called Advanced Wireless Technologies for Clever Engineering (ADWICE) in the second phase of the Teaming Program in 2016. Thanks to this program, the Centre can receive not only up to 15 million euros from European sources, but also other (investment) funds from the Operational Program Research, Development and Education (RDE).

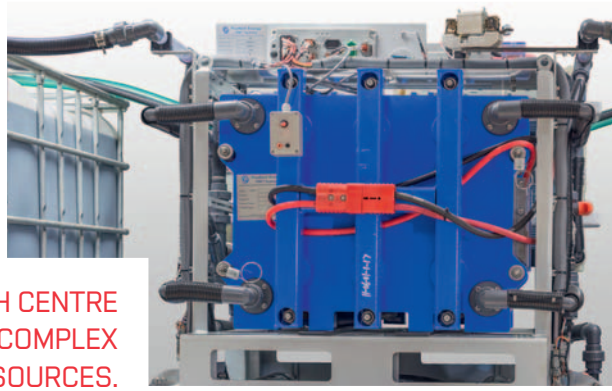
The main objective of 2016 will be completing the first phase of the ADWICE project and the preparation of the project related to the OP RDE. The Centre wants to expand its cooperation with foreign institutions, whether through bilateral projects or by encouraging the mobility of its staff.

Centre for the Research and Utilization of Renewable Energy Sources (CRURES)

The CRURES research centre deals with the complex questions of renewable energy sources. Its research team members are involved in chemical and photovoltaic energy sources, electromechanics, electrical technology, electrical drives, electricity, mobile robots and industrial electronics. In 2015, CRURES focused on the following five main research areas: optimization of electromechanical energy conversion; chemical and photovoltaic energy sources; generation, transmission, distribution and use of electricity; automation and sensory technologies; and off-process in switchgear.

The research activities of the Centre are funded substantially by the project of the National Sustainability Program called Energy in Terms of Sustainable Development (EN-PUR). Another major project of 2015 supported by the OP RDI was called Developing Research Capacities of the Centre. This project, with a subsidy of over 15 million CZK, was focused exclusively on upgrading laboratories with top equipment.

In addition to the basic research, the Centre focuses on collaboration with industry and the transfer of new technologies into the industrial sphere. The important components of the Centre include: the Switchgear Laboratory and the Laboratory of High Voltages, which are located in the List's Science and Technology Park. These strategically important laboratories are used for the research and development of heavy current and high-voltage electrical equipment. The laboratory equipment allows, for example, the simulation of extreme short-circuit conditions in the network, and lightning discharge into conducting wires. Major partners of their contractual research include SIEMENS, ABB, Eaton, as well as many smaller companies both from the Czech Republic (DRIBO) and abroad. In 2015 the volume of contractual research carried out in these labs exceeded 8 million CZK.



THE CRURES RESEARCH CENTRE COMPREHENSIVELY ADDRESSES THE COMPLEX ISSUES OF RENEWABLE ENERGY SOURCES.

2

BASIC INFORMATION ABOUT THE UNIVERSITY

2.1 Full name of the University, commonly used abbreviation, location and its constituent parts

Brno University of Technology
BUT
Antonínská 548/1, 601 90 Brno, Czech Republic
www.vutbr.cz

Faculties

Faculty of Architecture BUT
FA of BUT
Poříčí 237/5 Street, 639 00 Brno
www.fa.vutbr.cz

Faculty of Electrical Engineering and Communication of BUT
FEEC
Technická 3058/10 Street, 616 00 Brno
www.feec.vutbr.cz

Faculty of Chemistry of BUT
FCH
Purkyňova 464/118 Street, 612 00 Brno
www.fch.vutbr.cz

Faculty of Information Technology of BUT
FIT
Božetěchova 1/2 Street, 612 66 Brno
www.fit.vutbr.cz

Faculty of Business and Management of BUT
FBM
Kolejní 2906/4 Street, 612 00 Brno
www.fbm.vutbr.cz

Faculty of Civil Engineering of BUT
FCE
Veveří 331/95 Street, 602 00 Brno
www.fce.vutbr.cz

Faculty of Mechanical Engineering of BUT
FCI
Technická 2896/2 Street, 616 69 Brno
www.fme.vutbr.cz

Faculty of Fine Arts of BUT
FFA
Rybářská 125/13/15 Street, 603 00 Brno
www.ffa.vutbr.cz

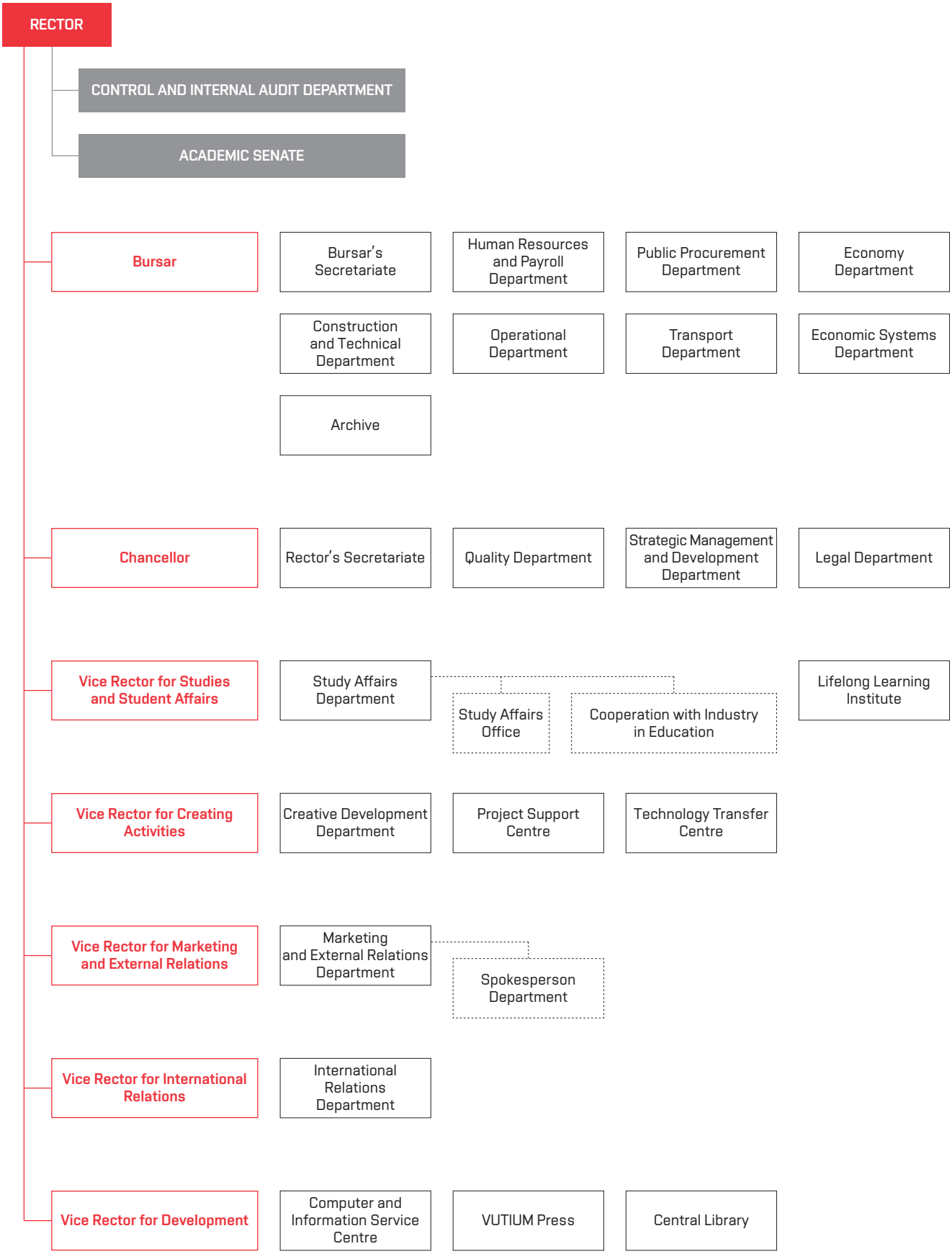
University Institutions

Institute of Forensic Engineering of BUT
IFE BUT
Purkyňova 464/118 Street, 612 00 Brno
www.usi.vutbr.cz

Centre of Sports Activities of BUT
CESA BUT
Technická 2896/2 Street, 616 69 Brno
www.cesa.vutbr.cz

Central European Institute of Technology of BUT
CEITEC BUT
Technická 3058/10 Street, 616 00 Brno
www.ceitec.vutbr.cz

2.2 Organizational chart of BUT



2.3 Members of Scientific Board, Management Board and the Academic Senate of BUT

Scientific Board of BUT

Chairman:
Prof. MSc Petr Štěpánek, PhD

Members:
Assoc. Prof. Mgr. Irena Armutidisová
Assoc. Prof. MSc Vojtěch Bartoš, PhD
Prof. MSc Ladislav Buřita, PhD
Prof. MSc Jarmila Dědková, PhD
MSc Jaroslav Doležal, PhD, dr. h. c.
Prof. RNDr. Miroslav Doupovec, PhD, dr. h. c.
Prof. MSc Rostislav Drochytka, PhD, MBA
MSc Miloš Filip
Prof. Michal Gabriel
Prof. MSc Lubomír Grmela, PhD
Prof. MSc Martin Hartl, PhD
Prof. PaedDr. Radek Horáček, PhD
Assoc. Prof. MgA Milan Houser
Assoc. Prof. MSc arch. Jan Hrubý, PhD – from 9. 6. 2015
Prof. MSc Tomáš Hruška, PhD
Prof. MSc Josef Chybík, PhD – to 9. 6. 2015
Prof. MSc Marcela Karmazínová, PhD
Assoc. Prof. MSc Jaroslav Katolický, PhD
MSc Jaroslav Klíma
Prof. MSc Petr Konvalinka, PhD
Prof. MSc Jan Kovanda, PhD
Prof. MSc Zdeněk Kůs. PhD
MSc Vlasta Loutocká
Prof. MSc Miroslav Ludwig, PhD
MSc Ilona Müllerová, DrSc.
Prof. MSc Drahomír Novák, DrSc.
MSc Eduard Palíšek, PhD, MBA
Prof. MSc Miloslav Pekař, PhD
Prof. MSc arch. Petr Pelčák
Prof. MSc Zbyněk Raida, PhD
Prof. MSc Karel Rais, PhD, MBA, dr. h. c.
Prof. MSc Robert Redhammer, PhD
Prof. MSc Petr Sáha, PhD
Assoc. Prof. MSc et MSc Stanislav Škapa, PhD
Assoc. Prof. MSc Aleš Vémola, PhD
Prof. MSc Stanislav Veselý, PhD
Prof. Peter Vojtáš, PhD
Prof. MSc Ivo Vondrák, PhD
Prof. MSc Radimír Vrba, PhD
Prof. MSc Martin Weiter, PhD
Assoc. Prof. MSc Jaroslav Zendulka, PhD

Management Board of BUT

Chairperson:
MSc Michal Štefl

Members:
MSc Eva Bartoňová – from 3. 8. 2015
Valentin Girstl
MSc Miroslav Hošek
PhDr. Miroslava Kopicová – from 7. 5. 2015
Mgr. Petr Kostík
Martin Maisner, PhD
MSc Lukáš Evžen Martinec, PhD
Mgr. Stanislav Moša
MSc Jiří Nekovář – from 3. 8. 2015
MSc Martin Pecina
MSc Petr Rafaj – from7. 5. 2015
Prof. Eduard Schmidt, PhD
MSc Jan Světlík
Prof. MD Jiří Vorlíček, PhD – from 3. 8. 2015

Academic Senate (AS) of BUT

Chairperson:
Assoc. Prof. MSc Petr Hanáček, PhD

Vice-chairpersons:
MSc Tomáš Mejzlík
Prof. Milada Vávrová, PhD

Chamber of Academic Staff of AS of BUT

Chairperson of Chamber:
Prof. Milada Vávrová, PhD

Members:
MSc Petr Beneš, PhD
MSc Albert Bradáč, PhD
Prof. MSc Jiří Burša, PhD
Mgr. Art. Žaneta Drgová
Prof. MSc Eva Gescheidtová, PhD
Assoc. Prof. MSc Petr Hanáček, PhD
MgA Tomáš Hrůza
MSc Bohumila Hybská
Assoc. Prof. MSc Jiří Kunovský, PhD
Mgr. Helena Musilová
MSc Tomáš Opravil, PhD
Pavel Popela, PhD
Milan Slezáček, PhD
MSc Lenka Smolíková, PhD
Assoc. Prof. MSc Miloslav Steinbauer, PhD
Prof. MSc arch. Vladimír Šlapeta, DrSc.
Prof. MSc Jiří Vala, PhD

Chamber of Students of AS of BUT

Chairperson of Chamber:
MSc Tomáš Mejzlík

Members:
MSc Marta Bímová
MSc Petr Dvořák
MSc et MSc Michaela Fiedlerová
BSc Václav Hummel
Mgr. Jana Kořínková
BSc Tomáš Krejčí
MSc Pavel Maxera
BSc Libor Zvěřina

Working commission of AS BUT

– Legislative committee

Chairperson:
Mgr. Helena Musilová

Members:
MSc Albert Bradáč, PhD
Prof. MSc Eva Gescheidtová, PhD
Pavel Popela, PhD – from 6. 10. 2015
Prof. MSc Jiří Vala, PhD

Students:
MSc et MSc Michaela Fiedlerová
MSc Pavel Maxera

– Economic Commission

Chairperson:
Pavel Popela, PhD

Members:
MgA Tomáš Hrůza
MSc Bohumila Hybská
Assoc. Prof. MSc Jiří Kunovský, PhD
MSc Tomáš Opravil, PhD
Milan Slezáček, PhD
MSc Lenka Smolíková, PhD
Assoc. Prof. MSc Miloslav Steinbauer, PhD
Prof. MSc Jiří Vala, PhD – from 12. 5. 2015
Prof. Milada Vávrová, PhD

Students:
MSc Petr Dvořák
BSc Václav Hummel
Mgr. Jana Kořínková
MSc Tomáš Mejzlík

– Pedagogical Commission

Chairperson:
Assoc. Prof. MSc Miloslav Steinbauer, PhD

Members:
MSc Petr Beneš, PhD
MSc Albert Bradáč, PhD

Students:
MSc Marta Bímová
MSc Petr Dvořák
BSc Václav Hummel
BSc Tomáš Krejčí
MSc Tomáš Mejzlík

– Commission for Creative Activities

Chairperson:
Assoc. Prof. MSc Jiří Kunovský, PhD

Members:
Prof. MSc Jiří Burša, PhD
Prof. MSc Eva Gescheidtová, PhD
MSc Bohumila Hybská
MSc Tomáš Opravil, PhD
MSc Lenka Smolíková, PhD
Prof. MSc Jiří Vala, PhD
Prof. Milada Vávrová, PhD

Students:
MSc et MSc Michaela Fiedlerová
MSc Pavel Maxera
BSc Libor Zvěřina

2.4 Representation of BUT among universities

Czech Rectors Conference

Prof. MSc Petr Štěpánek, PhD

BUT representatives in the Board of Higher Education (BHU)

Members of the BHU presidium:
Pavel Popela, PhD

Members of the BHU assembly:
MSc Helena Hanušová, PhD
MSc Ivana Jakubová
MSc Radek Kočí, PhD
Assoc. Prof. MSc arch. Gabriel Kopáčik, PhD
Assoc. Prof. MSc Libor Matějka, PhD, MBA
Assoc. Prof. MSc Bohumil Pacal, PhD
Pavel Popela, PhD
MSc Jan Roupec,
PhD Prof. Milada Vávrová, PhD
Mgr. Jan Zálešák, PhD

Members of the Student Chamber of the BHU:
MSc Pavel Maxera – delegate
MSc et MSc Michaela Fiedlerová – substitute

2.5 Mission, vision and strategic objectives of BUT

Brno University of Technology ranks among the top universities in the Czech Republic and aspires to reach excellence not only in the sphere of education, but also in science and research. In the field of science, research and innovation, BUT strives to intensify its cooperation with industry, including the public sphere, where it remains committed to creating the best possible conditions for creative work, technology transfer and growth of innovation potential.

The future of BUT is oriented on cooperation with other technical universities, both in the Czech Republic and abroad. One of the objectives is to maintain and strengthen the position of BUT in the Czech Republic and Europe. BUT makes a worthy partner to major workplaces and constantly strives to improve the level of educational activities connecting not only technical, but also artistic and economic specializations, creating an attractive environment for students, professionals and researchers. This endeavour is significantly facilitated by the accredited degree programs, which are to keep their high quality in the future.

2.6 Changes in the internal regulations of Brno University of Technology in 2015

No changes in internal regulations occurred at BUT in 2015.

2.7 Providing information pursuant to § 18 of Act no. 106/1999 Coll., on free access to information

The number of requests for information: 1 (request was granted)

The number of decisions to reject a request: 0

The number of appeals against the decision: 0

The number of complaints filed pursuant to § 16a, reasons for their submission and a brief description of their execution: 1 (Complaint directed against the procedure, respectively, inactivity of CEITEC that did not provide the information, or a decision to reject the request. The Rector of BUT pursuant to § 16a of Act no. 106/1999 Coll. "took the matter to the decision" and provided the applicant with the requested information).

The enumeration of granting exclusive licenses, incl. justifying the necessity of granting an exclusive license: 0

The copy of substantial parts of each court judgment in cases to review the legality of compulsory subject decisions of a refusal to provide information and a list of all expenses incurred by a compulsory subject in the context of judicial proceedings on rights and duties under this Act, and incl. costs for their own employees and the costs of legal representation: irrelevant (no action)

3

DEGREE PROGRAMS, ORGANIZATION OF STUDY AND EDUCATIONAL ACTIVITIES

3.1 Accredited degree programs by faculty, or other constituent part, implementing the accredited program or its part (Table 3.1)

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
		F	C/D	F	C/D	F	C/D		
Faculty of Architecture									
Technical sciences and disciplines	21–39	1	0	0	0	1	0	1	**3**
Faculty of Civil Engineering									
Technical sciences and disciplines	21–39	4	2	0	0	3	1	2	**12**
Faculty of Fine Arts									
Disciplines on culture and arts	81,82	1	0	0	0	1	0	1	**3**
Faculty of Chemistry									
Sciences and disciplines	11–18	0	0	0	0	0	0	2	**2**
Technical sciences and disciplines	21–39	2	2	0	0	5	4	3	**16**
Faculty of Electrical Engineering and Communication									
Technical sciences and disciplines	21–39	5	1	0	0	2	1	2	**11**
Faculty of Information Technology									
Technical sciences and disciplines	21–39	1	0	0	0	1	0	1	**3**
Faculty of Business and Management									
Economy	62,65	3	2	0	0	2	1	1	**9**
Faculty of Mechanical Engineering									
Technical sciences and disciplines	21–39	2	1	0	0	4	1	6	**14**
Central European Institute of Technology of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	2	0	2	**4**
Institute of Forensic Engineering of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	2	0	2	**4**
Total		**19**	**8**	**0**	**0**	**23**	**8**	**23**	**81**

Legend: F = full-time; C/D = combined/distant, CREF = "Classification of root educational fields" for each group of accredited programs.

Tab. 3.1: Accredited degree programs (numbers)

3.2 Degree programs delivered in a foreign language by the faculties and/or other constituent parts implementing the accredited study program or its part (Table 3.2)

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
		F	C/D	F	C/D	F	C/D		
Faculty of Architecture									
Technical sciences and disciplines	21–39	0	0	0	0	1	0	0	**1**
Faculty of Civil Engineering									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	2	**2**
Faculty of Fine Arts									
Disciplines on culture and arts	81,82	0	0	0	0	0	0	0	**0**
Faculty of Chemistry									
Sciences and disciplines	11–18	0	0	0	0	0	0	4	**4**

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
		F	C/D	F	C/D	F	C/D		
Faculty of Electrical Engineering and Communication									
Technical sciences and disciplines	21–39	1	0	0	0	1	0	2	**4**
Faculty of Information Technology									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	2	**2**
Faculty of Business and Management									
Economy	62,65	0	0	0	0	1	0	2	**3**
Faculty of Mechanical Engineering									
Technical sciences and disciplines	21–39	2	0	0	0	3	0	5	**10**
Institute of Forensic Engineering of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	0	**0**
Central European Institute of Technology of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	1	**1**
Total		**3**	**0**	**0**	**0**	**6**	**0**	**18**	**27**

Tab. 3.2: Degree programs in a foreign language (numbers)

3.3 Joint/double/multiple degree programs (Table 3.3)

BUT	Central European Institute of Technology of BUT
Name of program	**Advanced materials and nano-sciences**
Partner organization	The University of Jyväskylä
Affiliated organization	None
Start of the program implementation	1. 9. 2014
Kind of program (Joint/Double/Multiple Degree)	Double degree
Length of study	8 semesters
Type of program	Doctoral
Description of organization of studies, including the admission and completion of the study	E-registration, admission, enrolment , PhD evaluation 8 semesters of study, SDZ
How are diploma and diploma supplement issued?	Issuing standard diploma
How are student exchanges implemented?	There are no exchanges; a particular student is 6 months in Brno and 6 months in Finland.

BUT	Faculty of Mechanical Engineering of BUT
Name of program 1	**Manufacturing technology**
Partner organization	Technische Universität Chemnitz (Chemnitz, Germany)
Affiliated organization	None
Start of the program implementation	
Kind of the program (Joint/Double/Multiple Degree)	Double Degree
Length of study	6 semesters
Type of program	Bachelor's
Description of organization of studies, including the admission and completion of the study	1 academic year of study in Czech and 1 academic year of study in German

How are diploma and diploma supplement issued?	The graduates are awarded the title of Czech and a foreign university after completion of the bachelor's degree. Diploma and Diploma Supplement are passed on within the graduation ceremony or in person
How are student exchanges implemented?	The student exchange is implemented within Erasmus+ for 1 academic year.

Name of program 2	**Industrial Engineering**
Partner organization	Art et Métiers ParisTech (Cluny, France)
Affiliated organization	None
Start of program implementation	
Kind of program (Joint/Double/Multiple Degree)	Double Degree
Length of study	4 semesters
Type of program	Continuing Master's
Description of organization of studies, including the admission and completion of the study	1 academic year of study in Czech and 1 academic year in Finnish language; The prerequisite of the admission to the specialization Industrial Engineering is completion of the final grade of bachelor's study at a French university.
How are diploma and diploma supplement issued?	The graduates are awarded the title of Czech and a foreign university after completion of the bachelor's degree. Diploma and Diploma Supplement are passed on at the graduation ceremony or in person.
How are student exchanges implemented?	The student exchange is implemented within Erasmus+ for 1 academic year

Name of program 3	**Production systems**
Partner organization	Technische Universität Chemnitz (Chemnitz, Germany)
Affiliated organization	None
Start of program implementation	
Kind of program (Joint/Double/Multiple Degree)	Double Degree
Length of study	4 semesters
Type of program	Continuing Master's
Description of organization of studies, including the admission and completion of the study	1 academic year of study in Czech and 1 academic year in German
How are diploma and diploma supplement issued?	The graduates are awarded the title of Czech and a foreign university after completion of the bachelor's degree. Diploma and Diploma Supplement are passed on at the graduation ceremony or in person.
How are student exchanges implemented?	The student exchange is implemented within Erasmus+ for 1 academic year

BUT	**Faculty of Business and Management of BUT**
Name of program	**Economics and Management, specialization: European Business and Finance**
Partner organization	Nottingham Trent University (GB), Economic University of Karol Adamiecký in Katowice (PL)
Affiliated organization	None
Start of program implementation	From academic year 2008/2009
Kind of program (Joint/Double/Multiple Degree)	Joint Degree
Length of study	4 semesters
Type of program	Continuing Master's
Description of organization of studies, including the admission and completion of the study	The prerequisite of the admission to the specialization is successful completion of Bachelor's study in a related field. The Dean decides on admission on the basis of the motivation letter, a CV and proof of the English examination (all in English). The course of study: 1st, 2nd and 4th semesters at FBM, 3rd semester at Nottingham Trent University (GB).
How are diploma and diploma supplement issued?	After passing the final examination at FBM BUT, the successful graduates will receive a diploma with the title Master of Science (MSc) signed by Nottingham Trent University and a diploma with the title of engineer (MSc)
How are student exchanges implemented?	In the third semester, the students complete a mandatory internship at Nottingham Trent University in the UK

Tab. 3.3: Joint/Double/Multiple Degree programs

3.4 Accredited degree programs implemented jointly with another university based in the Czech Republic (Table 3.4)

BUT	Central European Institute of Technology of BUT
Name of program	**Advanced materials and nano-sciences**
Group CREF	Technical sciences and disciplines 21–39
Partner university	Masaryk University
Start of program implementation	September 1st 2013
Length of study	8 semesters
Type of program	Doctoral
Description of organization of studies, including the admission and completion of the study	E-registration, admission, enrolment , PhD evaluation 8 semesters of study, final doctoral exam

BUT	Faculty of Electrical Engineering and Communication of BUT
Name of study program 1	**Biomedical Technology and Bioinformatics**
Group CREF	B3930
Partner university	Masaryk University, Faculty of Medicine
Start of program implementation	2007/2008
Length of study	6 semesters
Type of program	Bachelor's
Description of organization of studies, including the admission and completion of the study	3-year BSc study at MU implemented at FEEC of BUT and the Faculty of Medicine of MU with the use of the specialized departments of the University Hospital Brno. The condition for admitting is completed high or secondary vocational education and meeting conditions in the Regulations of admission in the degree program BTBIO-A. The mode of completion – defence of the thesis, final state examination
Name of study program 2	**Biomedical Engineering and Bioinformatics**
Group CREF	N3952
Partner university	Masaryk University, Faculty of Medicine
Start of program implementation	2010/2011
Length of study	4 semesters
Type of program	Continuing Master's
Description of organization of studies, including the admission and completion of the study	2-year MSc study at MU in a full time mode implemented at FEEC of BUT and the Faculty of Medicine with the use of the specialized departments of the University Hospital Brno. The condition for admitting is completed high or secondary vocational education and meeting conditions in the Regulations of admission in the degree program BTBIO-A. The mode of completion – defence of the thesis, final state examination
Name of study program 3	**Audio engineering**
Group CREF	B3961
Partner university	Music Faculty of Janáček Academy of Performing Arts in Brno
Starting date of the program	2013/2014
Length of study	6 semesters
Type of program	Bachelor's
Description of organization of studies, including the admission and completion of the study	3-year bachelor's study at FEEC of BUT and Music Faculty of Janáček Academy of Performing Arts in Brno. The prerequisite for admitting is completed high or secondary vocational education and meeting conditions specified in the Regulations for admission in the degree program AUDIO-J. The mode of completion: defence of the bachelors thesis, final state examination

Name of study program 4	Information security
Group CREF	B3966
Partner university	Masaryk University, Faculty of Law
Starting date of the program	2015/2016
Length of study	6 semesters
Type of program	Bachelor's
Description of organization of studies, including the admission and completion of the study	3-year bachelor's study at FEEC of BUT and the Faculty of Law of MU in Brno. The prerequisite for admitting is completed high or secondary vocational education and meeting conditions specified in the Regulations for admission in the degree program IBEP-T. The mode of completion: defence of the bachelors thesis, final state examination

Tab. 3.4: Accredited degree programs implemented jointly with another university

3.5 Accredited degree programs implemented jointly with colleges (Table 3.5)

There are no such degree programs at BUT.

3.6 Accredited degree programs or their parts implemented by the University outside the municipality of its registered residence (Table 3.6)

There are no such degree programs at BUT.

3.7 Number of accredited degree programs described by the methodology of learning outcomes in accordance with the National Qualifications Framework of Tertiary Education

At present BUT has accredited degree programs described by the methodology of learning outcomes in accordance with the National Qualifications Framework of Tertiary Education.

3.8 Brief description of the credit study system

BUT has been holding the ECTS and DS Labels since 2009. Both certificates were defended in 2013. Assessment in all degree programs is compatible with ECTS (Local Grades) and is recognized precisely by the ECTS Label. The information system enables conversion to the correct ECTS credit system.

3.9 Other educational activities (summer schools, workshops, seminars, lectures delivered by professionals, etc.)

Individual faculties organize a variety of summer schools (e.g. Summer School of Electrical Engineering at FEEC, Summer Computer School for female secondary school students at the FIT, summer course Size Does Matter: Explore, Design & Touch the Nanoworld at the FME, and Summer School of Advanced Models of Building Materials and Structures at the FCE), discussion forums (EURO in the Czech Republic at the FBM, Diesel Gate at the FBM), competition (LEGO mechlab – the robotics contest for students of the FME, How do I like the FCH? for the students of the FCH, Internet Mathematical Olympiad of the FME for secondary school teams), plus a whole range of professionally oriented courses (Courses of expert minimum at the IFE , specific courses for the students of the FEEC, the in-service course Budgeting of Buildings at the FCE, or Courses of Technical Expertise at IFE).

4

STUDENTS

4.1 Students in accredited degree programs (Table 4.1)

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
		F	C/D	F	C/D	F	C/D		
Faculty of Architecture									
Technical sciences and disciplines	21–39	349	0	0	0	184	0	56	**589**
Faculty of Civil Engineering									
Technical sciences and disciplines	21–39	3 356	272	0	0	1 426	125	438	**5 617**
Faculty of Fine Arts									
Disciplines on culture and arts	81,82	161	0	0	0	93	0	22	**276**
Faculty of Chemistry									
Sciences and disciplines	11–18	0	0	0	0	0	0	46	**46**
Technical sciences and disciplines	21–39	555	41	0	0	225	52	158	**1 031**
Faculty of Electrical Engineering and Communication									
Technical sciences and disciplines	21–39	2 052	235	0	0	927	222	439	**3 875**
Faculty of Information Technology									
Technical sciences and disciplines	21–39	1 676	0	0	0	575	0	220	**2 471**
Faculty of Business and Management									
Economy	62,65	1 752	22	0	0	939	419	66	**3 198**
Faculty of Mechanical Engineering									
Technical sciences and disciplines	21–39	2 752	185	0	0	1 116	105	389	**4 547**
Institute of Forensic Engineering of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	477	0	101	**578**
Central European Institute of Technology of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	50	**50**
Total		**12 653**	**755**	**0**	**0**	**5 962**	**923**	**1 985**	**22 278**

Tab. 4.1: Students in accredited degree programs (numbers)

4.2 Paying students (Table 4.2)

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
		F	C/D	F	C/D	F	C/D		
Faculty of Architecture									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	0	**0**
Faculty of Civil Engineering									
Technical sciences and disciplines	21–39	3	0	0	0	1	0	0	**4**
Faculty of Fine Arts									
Disciplines on culture and arts	81,82	0	0	0	0	0	0	0	**0**
Faculty of Chemistry									
Sciences and disciplines	11–18	0	0	0	0	0	0	0	**0**
Technical sciences and disciplines	21–39	0	0	0	0	0	0	0	**0**
Faculty of Electrical Engineering and Communication									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	2	**2**

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
		F	C/D	F	C/D	F	C/D		
Faculty of Information Technology									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	0	**0**
Faculty of Business and Management									
Economy	62,65	0	0	0	0	5	0	0	**5**
Faculty of Mechanical Engineering									
Technical sciences and disciplines	21–39	1	0	0	0	0	0	6	**7**
Institute of Forensic Engineering of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	0	**0**
Central European Institute of Technology of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	0	**0**
Total		**4**	**0**	**0**	**0**	**6**	**0**	**8**	**18**

Tab. 4.2: Paying Students (numbers)

4.3 Students over 30 years of age (Table 4.3)

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
		F	C/D	F	C/D	F	C/D		
Faculty of Architecture									
Technical sciences and disciplines	21–39	5	0	0	0	5	0	24	**34**
Faculty of Civil Engineering									
Technical sciences and disciplines	21–39	3	92	0	0	5	36	170	**306**
Faculty of Fine Arts									
Disciplines on culture and arts	81,82	8	0	0	0	6	0	17	**31**
Faculty of Chemistry									
Sciences and disciplines	11–18	0	0	0	0	0	0	12	**12**
Technical sciences and disciplines	21–39	1	4	0	0	0	11	37	**53**
Faculty of Electrical Engineering and Communication									
Technical sciences and disciplines	21–39	5	59	0	0	2	53	140	**259**
Faculty of Information Technology									
Technical sciences and disciplines	21–39	1	0	0	0	1	0	59	**61**
Faculty of Business and Management									
Economy	62,65	2	9	0	0	9	58	24	**102**
Faculty of Mechanical Engineering									
Technical sciences and disciplines	21–39	3	41	0	0	2	30	120	**196**
Institute of Forensic Engineering of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	18	0	66	**84**
Central European Institute of Technology of BUT									
Technical sciences and disciplines	21–39	0	0	0	0	0	0	4	**4**
Total		**28**	**205**	**0**	**0**	**48**	**188**	**673**	**1 142**

Tab. 4.3: Students over 30 years of age

4.4 Unsuccessful students in accredited degree programs (Table 4.4)

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
Groups of accredited degree programs		**F**	**C/D**	**F**	**C/D**	**F**	**C/D**		
Sciences and disciplines	11–18	0	0	0	0	0	0	10	**10**
Technical sciences and disciplines	21–39	2 316	450	0	0	464	125	191	**3 546**
Economy	62,65	349	10	0	0	100	89	14	**562**
Disciplines on culture and arts	81,82	22	0	0	0	7	0	2	**31**
Total		**2 687**	**460**	**0**	**0**	**571**	**214**	**217**	**4 149**

Tab. 4.4: Unsuccessful students in accredited degree programs (numbers)

4.5 Measures to reduce academic failure

BUT organizes intensive supplementary courses in difficult subjects of bachelor's programmes (e.g. mathematics and physics). Students can also have individual consultations with their teachers.

5

GRADUATES

5.1 Graduates of accredited degree programs (Table 5.1)

BUT	CREF	Bachelor's Study		Master's Study		Continuing Master' Study		Doctoral Study	Total
Groups of accredited degree programs		F	C/D	F	C/D	F	C/D		
Sciences and disciplines	11–18	0	0	0	0	0	0	13	**13**
Technical sciences and disciplines	21–39	2 144	89	0	0	1 877	131	164	**4 405**
Economy	62,65	512	30	0	0	309	164	7	**1 022**
Disciplines on culture and arts	81,82	26	0	0	0	24	0	2	**52**
Total		**2 682**	**119**	**0**	**0**	**2 210**	**295**	**186**	**5 492**

Tab. 5.1: Graduates of accredited degree programs (numbers)

5.2 Cooperation of BUT with its graduates

BUT cooperates with its graduates in the preparation of professional projects, dissertations, recruitment and educational activities. Contact with graduates is possible at www.vutbr.cz/absolventi. The web page offers updated information on successful graduates, lifelong learning, results of regular surveys among alumni, a database of graduates and dissertations, job opportunities, cultural and sporting events at the university, etc.

The graduates are also regularly informed about the most important events at the university in the newsletter VUTARIUM. The Club of Alumni and Friends of the Faculty of Electrical Engineering and Communication and the Faculty of Information Technology organize regular lectures, meetings, counselling and various cultural events for their members. SAFAST – the volunteer association of the graduates of the Faculty of Civil Engineering aims to maintain good relations with faculty alumni.

5.3 BUT graduates employability surveys

BUT carries out regular surveys of graduates every two years and irregular surveys among their employers. In 2015, they addressed BUT graduates of the years 2013 and 2014. BUT also launched a poll among the students completing master's degree programs; they are asked, in addition to evaluating their studies, about their further study, work plans, and preparedness for employment or business. BUT uses both the surveys to gain comprehensive information about the employers of its graduates. This facilitates their consequent targeted addressing.

5.4 Cooperation with prospective employers of BUT graduates

The individual faculties address specific employers according to their specializations. On the occasion of the Day of Firms (FME), PerFEKT Job Fair (FEEC), or the Day of Chemistry (FCH), students have the opportunity to obtain job offers or internships from specific companies. BUT is also involved in the organization of JobChallenge and iKariera Fairs – the largest job fairs in Brno, organized by the student organization IAESTE.

BUT faculties seek to establish effective links with the commercial sector to maximize employability of their graduates. They utilize the capabilities of potential employers to deliver external lecturers and company presentations, host educational field trips at their workplaces and assign topics of dissertations. The selected faculties and constituent parts use their websites to publish offers of traineeships and internships as well as to advertise job vacancies for their students and graduates.

6

INTEREST IN STUDIES

6.1 Interest of BUT applicants in studies (Table 6.1)

BUT	CREF	Bachelor's Study			Master's Study			Continuing Master's Study			Doctoral Study		
		No. of applications	No. of the admitted	No. of the registered for the study	No. of applications	No. of the admitted	No. of the registered for the study	No. of applications	No. of the admitted	No. of the registered for the study	No. of applications	No. of the admitted	No. of the registered for the study
FA													
Technical sciences and disciplines	21–39	432	177	114	0	0	0	190	156	111	33	10	10
FCE													
Technical sciences and disciplines	21–39	2 620	2 162	1 227	0	0	0	1 376	912	773	80	12	12
FFA													
Disciplines on culture and arts	81,82	377	53	49	0	0	0	78	47	47	12	6	6
FCH													
Sciences and disciplines	11–18	0	0	0	0	0	0	0	0	0	13	13	12
Technical sciences and disciplines	21–39	848	550	315	0	0	0	265	197	176	42	37	37
FEEC													
Technical sciences and disciplines	21–39	2 040	1 423	1 091	0	0	0	736	698	559	102	89	84
FIT													
Technical sciences and disciplines	21–39	1 516	936	636	0	0	0	402	285	274	58	51	51
FBM													
Economics	62,65	2 688	1 384	784	0	0	0	2 617	1 879	644	22	15	14
FME													
Technical sciences and disciplines	21–39	2 329	2 274	1 202	0	0	0	1 156	1 014	592	81	73	68
IFE													
Technical sciences and disciplines	21–39	0	0	0	0	0	0	503	401	230	26	15	15
CEITEC													
Technical sciences and disciplines	21–39	0	0	0	0	0	0	0	0	0	21	20	15
Total		**12 850**	**8 959**	**5 418**	**0**	**0**	**0**	**7 323**	**5 589**	**3 406**	**490**	**341**	**324**

Tab. 6.1: Interest in studies at BUT

6.2 Characterization of entrance exams

BUT has established a system of written entrance examinations for all degree programs in the core subjects of the faculties (mathematics, physics, chemistry, computer science, general scholastic aptitude, and foreign language). In the artistic and architectural fields, the applicants must also pass a specific aptitude test. Based on their guidelines for admissions, most of the faculties can waive the entrance examination under precisely defined conditions. The faculties perform entrance exams autonomously, without external providers.

6.3 Continuing master's and PhD students who have successfully completed previous study at another university (Table 6.2)

BUT	Continuing Master's Study	Doctoral Study
Faculty of Architecture	31	2
Faculty of Civil Engineering	80	19
Faculty of Fine Arts	20	2
Faculty of Chemistry	43	15
Faculty of Electrical Engineering and Communication Technology	90	13
Faculty of Information Technology	28	6
Faculty of Business and Management	233	4
Faculty of Mechanical Engineering	76	20
Institute of Forensic Engineering	48	8
Central European Institute of Technology BUT	0	7
Total	**649**	**96**

Tab. 6.2: Continuing master's and Ph.D. students who have successfully completed previous study at another university

6.4 Cooperation of BUT with secondary schools

BUT collaborates actively with secondary schools, which is evident in the Road Show, whose aim it is to inform high school students about study opportunities at BUT. The employees of the Department of Marketing and External Relations together with the students of individual faculties give presentations about the study options at BUT and provide potential applicants with information about entrance exam preparation, study organization, accommodation and food possibilities, studying abroad, activities of student associations, etc.

The selection of secondary schools is based on the TOP school chart, which is created in connection with the event Scholarship for the 500 Top Graduates. Secondary schools are ranked according to the number of their successful graduates who enter BUT. The principals of the best secondary schools are annually invited to meet the Rector of BUT.

In 2015, BUT actively participated in the Gaudeamus education fairs held in Prague, Brno and Nitra, as well as the Akadémia Fair in Bratislava.

7

ACADEMIC STAFF

7.1 Academics and researchers in FTE numbers (Table 7.1)

BUT	Academic Staff							Scientific (non-academic.) Staff	Total
	Total	Profess.	Assoc. Profess.	Asst. Profess.	Asst.	Lects.	SRDE		
FFA	32.868	4.500	7.182	6.167	15.019	0.000	0.000	0.000	**32.868**
FCE	326.332	31.108	59.823	170.496	57.961	0.000	6.944	54.859	**381.191**
FMI	245.626	37.320	67.105	115.387	20.927	1.000	3.887	55.882	**301.508**
FIT	46.611	5.824	13.050	26.429	1.308	0.000	0.000	21.543	**68.154**
FA	44.449	7.290	15.799	15.313	6.047	0.000	0.000	1.070	**45.519**
FCH	55.114	10.767	12.536	30.811	0.000	1.000	0.000	25.459	**80.573**
FBM	73.408	8.299	17.020	43.830	4.259	0.000	0.000	0.357	**73.765**
FEEC	189.168	26.814	56.731	88.619	16.004	1.000	0.000	29.763	**218.931**
CESA	15.007	0.700	2.300	4.876	7.131	0.000	0.000	0.000	**15.007**
IFE	9.478	1.585	3.293	4.600	0.000	0.000	0.000	0.000	**9.478**
CEITEC	14.743	0.000	0.000	13.873	0.870	0.000	0.000	86.331	**101.074**
ILL	1.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	**1.000**
Rectorate	1.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	**1.000**
Total	**1 054.804**	**134.207**	**255.839**	**521.401**	**129.526**	**3.000**	**10.831**	**275.264**	**1 330.068**

Legend: SRDE = Scientists, researchers and development employees engaged in teaching activities.

Tab. 7.1: Academics and researchers (FTE numbers)

FTE numbers represent the proportion of the total number of hours actually worked in the reference period for all employees and the total annual working time per employee working full time.

7.2 Age structure of academic and research staff stating the number of women (Table 7.2)

BUT	Academic Staff												Scientific Staff		Total
	Professors		Associate Professors		Assistant Professors		Assistants		Lecturers		SRDE				
	total	women	total	women	total	women	total	women	total	women	total	women	total	women	
Under 29 years	0	0	0	0	8	3	34	13	0	0	0	0	58	16	**100**
30–39 years	2	0	43	2	323	59	83	25	1	1	0	0	155	27	**607**
40–49 years	10	1	84	6	95	26	26	15	1	1	1	0	35	10	**252**
50–59 years	40	5	59	15	64	32	14	10	0	0	0	0	26	3	**203**
60–69 years	59	5	73	9	70	32	2	1	1	0	1	0	16	1	**222**
Over 70 years	42	3	44	5	11	2	0	0	0	0	1	0	7	0	**105**
Total	**153**	**14**	**303**	**37**	**571**	**154**	**159**	**64**	**3**	**2**	**3**	**0**	**297**	**57**	**1 489**

Tab. 7.2: Age structure of academic and research staff (numbers of individuals)

7.3 Numbers of academic staff by the range of workloads and the highest qualification achieved (Table 7.3)

BUT			Academic Staff		Total
Faculty of Fine Arts					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	0	1	0	0	**1**
Up to 0.5	1	0	1	11	**13**
Up to 0.7	0	0	0	0	**0**
Up to 1.0	4	7	5	12	**28**
Total	**5**	**8**	**6**	**23**	**42**
Faculty of Civil Engineering					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	7	5	12	11	**35**
Up to 0.5	1	6	30	17	**54**
Up to 0.7	4	2	16	5	**27**
Up to 1.0	27	56	165	57	**305**
Total	**39**	**69**	**223**	**90**	**421**
Faculty of Mechanical Engineering					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	8	16	32	19	**75**
Up to 0.5	14	9	19	10	**52**
Up to 0.7	8	13	15	3	**39**
Up to 1.0	25	59	104	21	**209**
Total	**55**	**97**	**170**	**53**	**375**
Faculty of Information Technology					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	0	2	6	1	**9**
Up to 0.5	2	2	4	1	**9**
Up to 0.7	7	14	17	1	**39**
Up to 1.0	0	13	11	0	**24**
Total	**9**	**31**	**38**	**3**	**81**
Faculty of Architecture					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	0	0	0	0	**0**
Up to 0.5	0	0	1	0	**1**
Up to 0.7	0	1	0	0	**1**
Up to 1.0	7	15	15	7	**44**
Total	**7**	**16**	**16**	**7**	**46**

BUT			Academic Staff		Total
Faculty of Chemistry					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	3	0	4	0	**7**
Up to 0.5	1	1	4	0	**6**
Up to 0.7	0	2	3	0	**5**
Up to 1.0	9	12	26	1	**48**
Total	**13**	**15**	**37**	**1**	**66**
Faculty of Business and Management					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	0	0	1	0	**1**
Up to 0.5	0	1	4	3	**8**
Up to 0.7	1	0	0	0	**1**
Up to 1.0	8	18	43	6	**75**
Total	**9**	**19**	**48**	**9**	**85**
Faculty of Electrical Engineering and Communication					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	5	12	15	1	**33**
Up to 0.5	9	9	12	1	**31**
Up to 0.7	4	8	20	2	**34**
Up to 1.0	20	50	75	16	**161**
Total	**38**	**79**	**122**	**20**	**259**
Centre of Sports Activities					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	0	1	0	2	**3**
Up to 0.5	0	0	0	0	**0**
Up to 0.7	1	0	0	0	**1**
Up to 1.0	0	2	5	6	**13**
Total	**1**	**3**	**5**	**8**	**17**
Institute of Forensic Engineering					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	0	0	0	0	**0**
Up to 0.5	1	1	0	0	**2**
Up to 0.7	0	0	1	0	**1**
Up to 1.0	1	3	4	0	**8**
Total	**2**	**4**	**5**	**0**	**11**

BUT			Academic Staff		Total
Central European Institute of Technology					
Range of workloads	**Profs.**	**Assoc. Profs.**	**DSc., PhD, Th.D.**	**others**	
Up to 0.3	0	0	0	0	**0**
Up to 0.5	0	0	0	0	**0**
Up to 0.7	0	0	1	0	**1**
Up to 1.0	0	0	15	1	**16**
Total	**0**	**0**	**16**	**1**	**17**

Tab. 7.3: Numbers of academic staff by the range of workloads and the highest qualification achieved (numbers of individuals)

7.4 Numbers of academic staff with foreign citizenships (Table 7.4)

BUT	
Faculty of Fine Arts	4
Faculty of Civil Engineering	7
Faculty of Mechanical Engineering	9
Faculty of Information Technology	2
Faculty of Architecture	0
Faculty of Chemistry	4
Faculty of Business and Management	4
Faculty of Electrical Engineering and Communication	7
Centre of Sports Activities	0
Institute of Forensic Engineering	0
Central European Institute of Technology	1
Total	**38**

Tab. 7.4: Academic staff with foreign citizenships (numbers of individuals)

7.5 The number of Associate Professors and Professors appointed in 2015 (Table 7.5)

BUT	Number	Average age of the newly appointed
Faculty of Civil Engineering		
Professors appointed in 2015	0	0
Assoc. Professors appointed in 2015	4	39.5
Faculty of Mechanical Engineering		
Professors appointed in 2015	0	0
Assoc. Professors appointed in 2015	6	40
Faculty of Electrical Engineering and Communication		
Professors appointed in 2015	0	0
Assoc. Professors appointed in 2015	7	39

BUT	Number	Average age of the newly appointed
Faculty of Architecture		
Professors appointed in 2015	0	0
Assoc. Professors appointed in 2015*	1	63
Faculty of Chemistry		
Professors appointed in 2015**	3	48
Assoc. Professors appointed in 2015	6	40
Faculty of Fine Arts		
Professors appointed in 2015	0	0
Assoc. Professors appointed in 2015	2	41
Faculty of Business and Management		
Professors appointed in 2015	0	0
Assoc. Professors appointed in 2015	3	39
Faculty of Information Technology		
Professors appointed in 2015	1	39
Assoc. Professors appointed in 2015	2	37
Total no. of Professors	**4**	
Total no. of Assoc. Professors	**31**	

* 1×, self-employed VŠB-TU Ostrava

** 1× employee of UTB in Zlín and 1× employee of UJEP Ústí nad Labem

Tab. 7.5: Newly Appointed Assoc. Professors and Professors (numbers)

7.6 Overview of continuing education courses for BUT academic staff (Table 7.6)

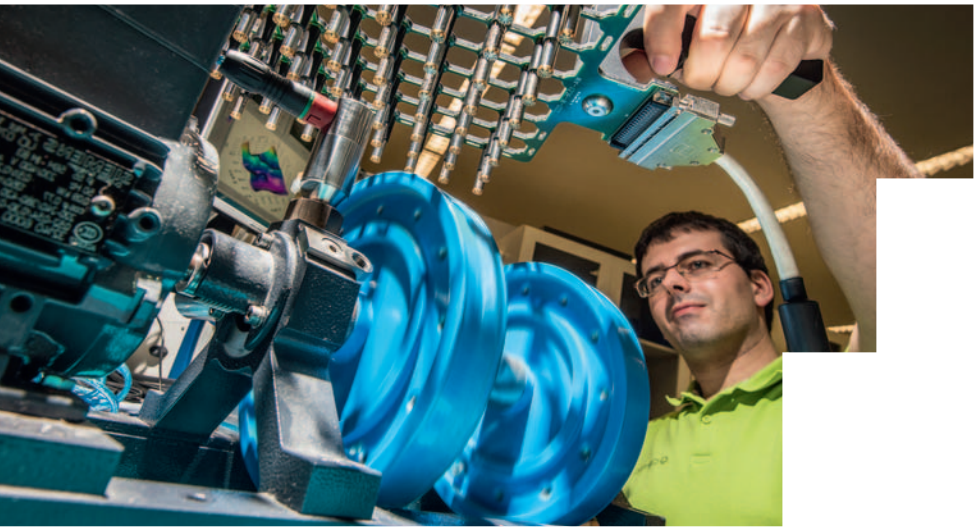
BUT	Number of courses	Number of participants
Courses focused on teaching skills	1	25
Courses focused on general skills	183	1 583
Specialized courses	0	0
Total	**184**	**1 608**

Tab. 7.6: Overview of continuing education courses for academic staff

7.7 Career Code for academic staff and motivational revenue tools for employees based on the achieved results

BUT does not have an elaborated career code for academic staff. Once a year performance of individual employees is evaluated, which determines the variable component of wages for the next period. The employees have the opportunity to get extra bonuses while ensuring superior one-off tasks.

8



SOCIAL AFFAIRS OF STUDENTS AND EMPLOYEES

8.1 Numbers of students granted or in the regular receipt of a scholarship in a given year (Table 8.1)

BUT – purpose of scholarship	Numbers of students	Numbers of scholarships
excellent study results according to § 91 Par. 2 font a)	1 472	7 409
excellent study results according to § 91 Par. 2 font a)	2 681	5 471
for research, development and innovation activities under special legislation, § 91 Par. 2 font c)	1 128	3 404
difficult social situation of the student according to § 91 Par. 2 font d)	0	0
difficult social situation of the student according to § 91 Par. 3	257	562
cases deserving special consideration pursuant to § 91 Par. 2 font e)	0	0
accommodation scholarship	14 603	35 439
to promote study abroad according to § 91 Par. 4 point. a)	1 773	2 255
to promote study in the Czech Republic pursuant to § 91 Par. 4 font b)	11	94
doctoral students according to § 91 Par. 4 font c)	1 291	12 794
other scholarships	471	614
Total	**23 687**	**68 042**

Tab. 8.1: Scholarships according to purpose (numbers of students)

8.2 Characteristics of scholarship programs

Besides the basic scholarship programs, BUT awards scholarships to support mobility, admission of the best applicants into first year of undergraduate programs (one-off support for the best 500 students admitted according to the results of the school-leaving examination), or to support the students who, for example, due to an emergency in their families, are unable to finance the study related costs. Scholarships are also provided by the individual faculties (especially merit or social scholarships). Special scholarships can be awarded by the Rector according to the Scholarship Rules of BUT.

8.3 The level of advisory services provided at BUT

The Institute of Lifelong Learning of BUT (hereinafter ILL) has been providing BUT students with counselling services since 2006. Their main activities are focused on career counselling (group and individual), socio-psychological and legal counselling, and providing for students with special study needs, as well as on collaboration with companies and other organizations.

ILL offers group activities with the aim of developing soft skills: stress management, presentation skills, development of teamwork, etc. It also organizes courses preparing students for job interviews – How to Write a CV, use of the Assessment Centre, etc. During 2015, the Institute implemented 53 courses of this type. It is also involved in organizing the Job Challenge fair, which was visited by about 500 BUT students.

Career counselling provided by ILL enables participants to create a professional and personal student profile; it advises students on how to write their CVs and how to conduct oneself at job interviews, even providing coaching services to selected candidates. In 2015 the Institute provided 78 individual counselling sessions. ILL also offers psychological counselling, providing 246 consultations of this type in 2015. These consultations help students with their personal development and in difficult life situations.

Counselling	Number of employees/FTE workloads	Number of counselling hours per week	Number of counselling (contacts)		
			in person	over the phone	by e-mail
Academic	2/0.05	2	168	10	20
Psychological	2/0.2	6	246	5	5
Career	2/0.4	7	1 176	10	20
Counselling for students with various types of handicaps	2/0.9 + 2/0.05	16	1 350	0	0
Other	4/0.1	1	20	0	0

Tab. 8.1.1 is not a part of the electronic spread sheets recorded by the Ministry of Education, Youth and Sports and is used solely for the internal needs of BUT.

ILL also offers BUT students study orientation during which the first year students become familiar with their course of study, the university facilities, information systems and their classmates. In 2015 the Institute organized 10 adaptation groups called "Vuťákoviny".

Counselling for students with various types of handicaps (see section 8.4) is an important part of ILL services. Other activities include surveys conducted among BUT students, alumni and staff. In 2015, the study "Overcoming Architectural Barriers" was started at the Faculty of Civil Engineering of BUT. The outcome of the study will map the technical documentation of barriers on the faculty's campus.

In 2015, promotional leaflets for BUT applicants with hearing impairments were prepared. Furthermore, counselling services were presented at the Secondary School for Students with Impaired Hearing in Brno-Jundrov. An electronic dictionary of Czech sign language was produced containing specific technical terms and expressions.

8.4 Approaching students with special needs

Students with special needs can benefit from an individualized approach at the faculties. In more serious cases, the faculties can obtain support from the Ministry of Education, Youth and Sports. The Institute of Lifelong Learning operates the "Over the Blocks" counselling centre, which coordinates the activities of the faculties in this area and helps students with special needs.

Economically challenged students can use social and legal counselling aimed at providing information on state benefits, scholarships related to the social situation of a student, or scholarships provided by foundations. Both counselling and law-oriented courses are individual. Students who are socially challenged can obtain free legal advice (e.g. child support obligations, labour law and criminal law issues). In 2015, the Institute provided 74 individual and group consultations in the social-legal and legal areas.

Applicants and students with special needs (e.g. specific learning disability, impaired health, mental illness, chronic somatic diseases) are provided with support based on the Ministry of Education standards for this area. Services of the Institute offer the possibility to adapt the admission procedure and to organize the study using supportive measures. In 2015, the number of transcription and interpretation services and the number of hours of individual instruction increased dramatically. The subjects that are taught individually include mainly the English language, mathematics, physics, two specific subjects and the Czech language.

In 2015, 135 BUT students with special needs benefitted from a total of over 1,500 hours of the above-mentioned services. The services include individual lessons of English and Czech, mathematics, physics, strength of materials, statics, interpretation into Czech sign language, simultaneous transcription, content writing, articulation interpreting, or help with spatial orientation. Students are also offered speech therapy.

Students with health disabilities (e.g. attention disorders, mood disorders, anxiety, sleep disorders) are offered nervous system training using the EEG Biofeedback method, which is a modern method of mental performance training. EEG Biofeedback is provided by two certified therapists. Interest in this service increased significantly in 2015 (642 individual one-hour sessions).

8.5 Support of exceptionally gifted students and cooperation with secondary schools

BUT holds a regular competition called Top 500, where the best applicants receive a one-time stipend (see Section 6.4). This event motivates secondary school graduates to choose technical fields offered by BUT. The talented students of higher grades are supported by the individual faculties. The exceptionally gifted students have the opportunity to receive merit scholarships or participate in research projects. BUT also offers its talented students rank in auxiliary scientific posts.

8.6 Housing and food services of BUT (Table 8.2)

Total bed capacity of university dormitories	6 457
Number of beds in rented facilities	0
Number of applications for accommodation to 31/12/2015	2 691
Number of applications granted for accommodation to 31/12/2015	2 691
Number of bed-days in 2015	1 583 201
Number of main meals served to students in 2015	860 347
Number of main meals served to employees in 2015	101 980
Number of main meals served to other boarders in 2015	74 349

Tab. 8.2: Housing and food

8.7 BUT employee care

BUT has contracted medical services to provide its employees with health care. University staff have the possibility to use some training and recreation centres outside of Brno city limits. In Brno, the Centre of Sports Activities of BUT offers sports and recreation for BUT employees. BUT employees are provided with a meal allowance; using vouchers, they can have meals in university canteens and other catering establishments.

The University provides its employees with retirement and life insurance contributions. In extreme social cases, it is possible to apply for a one-time contribution in the form of non-repayable financial assistance. BUT actively supports the language training of its employees and generally strives to develop their professional qualifications.

9

INFRASTRUCTURE

9.1 Central Library of BUT (Table 9.1)

The BUT Central Library (hereinafter CL) fulfils two basic functions: it is a coordination and methodical workplace for eight faculty libraries (i.e. it provides central management of the systems shared by all the libraries) and provides services directly to its users. The CL operates and manages the Aleph500 library system, which is an indispensable data source for Primo interface searches. In 2015, CL upgraded Aleph500, thus increasing the effectiveness of the searches, eliminating duplications and controlling the catalogue records.

The CL also manages the Primo discovery system, which brings users advanced possibilities of information sources: bX services (article recommendations based on user behaviour), the Cite PRO citation manager, and an interface for receiving requests for electronic document delivery. During 2015, all expansions have been developed and stabilized by removing minor technical inconsistencies.

Last year CL expanded its portfolio of electronic information resources based on needs analyses of the individual BUT faculties and departments. Primo has had an obvious positive impact on the use of electronic information resources. In 2015, all the available information sources yielded more than 700 000 records.

The CL started the systematic support of individual authors and teams so that they could publish in professional journals and conferences (editorial boards). The authors are provided with continuous consultations throughout the whole year. Systematic and closer cooperation has already been established with five editorial boards at BUT.

In cooperation with the faculty libraries, CL organized e-learning courses of information literacy for first-year students. The courses were completed by nearly 2 200 students. There are basic information skills courses with additional courses for PhD students, focusing on electronic information resources, specialized text publishing and citation. The e-learning courses are operated by University Moodle.

BUT is building an institutional repository – the Digital Library (DL), which makes all digital content produced at the university publically accessible. The most comprehensive collection is the archive of electronic versions of theses and dissertations. Proper attention is paid to the scientific journals issued by the University. At the end of 2013, BUT signed the Berlin Declaration, adopted an institutional policy and professed the principles of open publishing. These initiatives resulted in linking up with Apollo IS in 2014, which enables the authors, after verifying the license conditions, to publish their scientific results easily in Open Access mode by DL. Furthermore, DL became involved in the OpenDOAR and OpenAIRE projects, gaining higher visibility. DL operates on the basis of the DSpace platform, which was transferred to a new version in 2015. Additionally, DL continues to house the initiative of financial support to authors – a fund supporting Open Access publishing.

BUT	Numbers
Annual acquisitions	9 439
Total library fund	229 718
Number of subscribed journals: – physically – electronically (estimate)	 801 100

Tab. 9.1: University Libraries

9.2 VUTIUM – publishing house

In 2015 VUTIUM published 6020 copies of a new edition of the world-famous textbook Organic Chemistry (McMurry), with organic chemistry representing 57.7% of the total sales volume for the year. Another 24% is represented by the textbook Physics, published in the previous year, and 8.1% by Construction of Machine Components. The total amount of ISBN numbers assigned in 2015 reached 234.

The magazine "Events at BUT" had 11 issues with a total annual print run of 9 900 copies (with each issue having a print run of 900 copies). Each issue has 32 pages and 4 cover pages. The editorial board met in November 2015 and proposed the order of the titles for the 2016 publishing plan.

VUTIUM initiated an exhibition on the work of university publishers. The exhibition was held at the Museum of Literature in Moravia, which is housed on the premises of the Benedictine Monastery in Rajhrad. In addition to VUTIUM, other participants included: the publishing houses of Masaryk University, Mendel University and Janáček Academy of Performing Arts. The exhibition took place from May until the end of November and was visited by almost eight thousand people.

In 2015 VUTIUM participated in three other book exhibitions and fairs – Book World Prague (May), Autumn Book Fair in Havlíčkův Brod (October) and the International Book Fair in Frankfurt (October). As well as being the official publishing house of BUT, VUTIUM is a member of the Association of Czech Booksellers and Publishers and a collective member of DILIA.

9.3 Computer and information services

In 2015 the Centre of Computer and Information Services of BUT (hereinafter CCIS) developed a high-speed fibre optic network, which now employs 44 km of optic lines. The main objective of the development of the optic-cable network was the replacement of risky sections – completing advanced connections and transferring obsolete air routes. The CEITEC premises were connected with a backbone network: 1.2 km of ground routes were newly built and 1.2 km of new fibre optic cables were blown in; Antonínská 1 Street was connected with Božetěchova 1 Street; a part on Poděbradova Street was prepared; suspension lines between Květná and Lipová Streets were replaced; and the cable segment on Chodská Street was rerouted.

The backbone network is equipped with active elements supporting the speed of 40 Gb/s. In 2015, a new backbone node was put to work on Technická 2 Street. The Internet is backed up over the network CESNET 2× 10 Gb/s and activities to increase the connection speed to 40 Gb/s have begun. The connection is currently in test mode on Kounicova 67a Street. CWDM technology was launched on leased fibre routes, which allows BUT to satisfy the increasing demand for bandwidth and the limited number of available optical fibres. Building new facilities and expanding the wireless networks caused a significant increase of IP traffic from private address ranges, thus saving public IPv4 addresses, to alleviate worldwide shortages. For this reason, the powerful Carrier-grade NAT system was deployed at the end of last year.

In 2015, CCIS took over the management of BUT telephone exchanges and the administration of mobile telecommunications services. A public tender for a new mobile operator was carried out. BUT also began using the vut.cz domain, in addition to the original vutbr.cz, which, of course, will not be cancelled. The vut.cz domain worked in 2015 for the websites and cloud services, including a new cloud-based e-mail format: name.surname@vut.cz, which is now available for all employees and students, and remains functional even after the termination of their employment or study.

CCIS participated in the implementation of a new visual style: the most commonly used printing kits with the new BUT logo were prepared; the design of the electronic application form was modified. In 2015, the system for the news website ZVUT.cz was completed and the latest posts from this website were implemented into the university websites.

A part of the information system processing contract change sheets for foreign university students (Learning agreements) was prepared. This new part of the information system records Erasmus+ academic staff mobility. The information system also includes detailed statistics of sports disciplines that are now a part of the study information system. Cooperation with CCIS allowed the completion of a section for supporting students with special needs, including the registration of assistance services and their integration into the instructions. The transition to the new version of the University e-learning system Moodle, whose preparation took several years, was completed.

The information system for Research and Development now uses new modules for the R&D results, including publications, a new module for project registration, which manages the extended model of the project lifecycle, including the project approval in an upcoming signature book. The part of the information system for the registration of internal standards and guidelines, which allows the recording of their links, replacements and supplements, including the registration of historic internal legislation status, was also completed.

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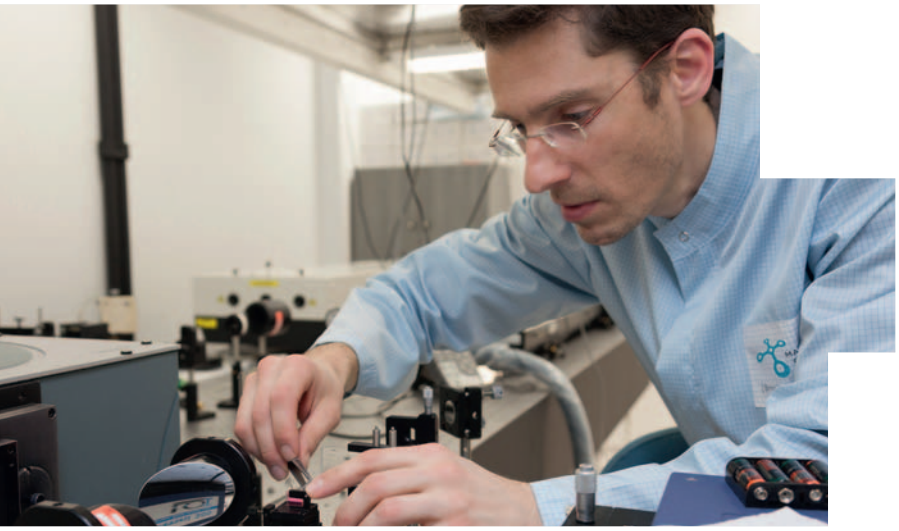


LIFELONG LEARNING

10.1 Numbers of lifelong learning courses at BUT (Table 10.1)

BUT	CREF	Career focused courses			Interest courses			U3A	Total
Groups of accredited study		under 15 hrs.	under 100 hrs.	more	under 15 hrs.	under 100 hrs.	more		
Sciences and disciplines	11–18							1	1
Technical sciences and disciplines	21–39		19					53	72
Health, medical. and pharmacological sciences	51–53							5	5
Social sciences, disciplines and services	61,67,71–73		2	45				7	54
Economics	62,65							2	2
Pedagogy, teaching and social care	74,75			1					1
Disciplines on culture and arts	81,82							8	8
Total			**21**	**46**				**76**	**143**

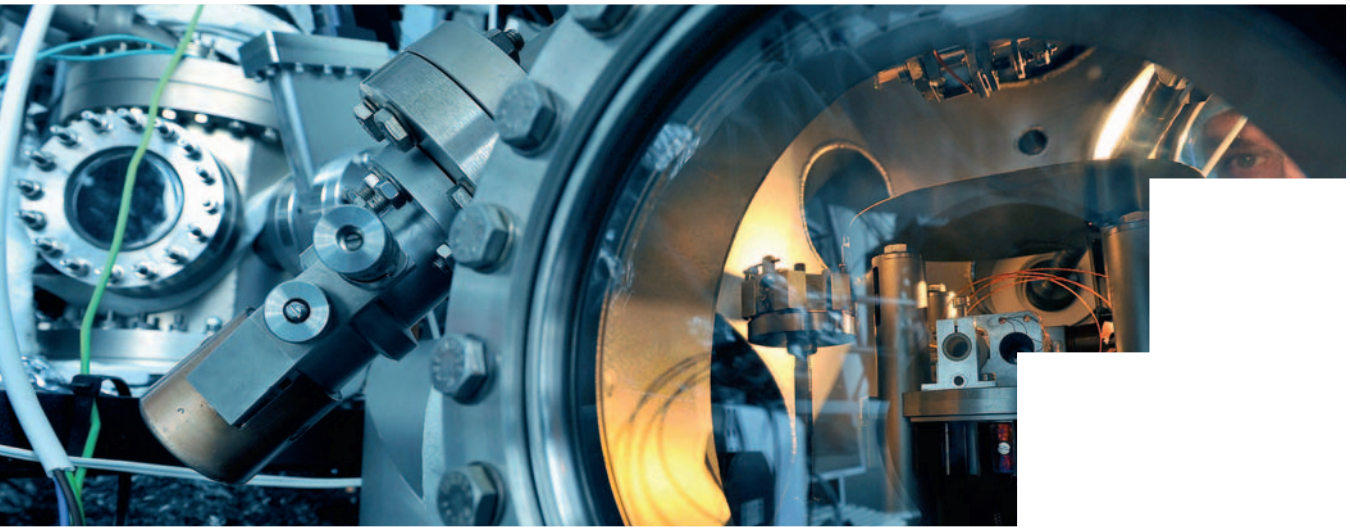
Tab. 10.1: Lifelong Learning courses at BUT (numbers of courses)

10.2 Numbers of participants in lifelong learning courses at BUT (Table 10.2)

BUT	CREF	Career focused courses			Interest courses			U3A	Total
Groups of accredited study		under 15 hrs.	under 100 hrs.	more	under 15 hrs.	under 100 hrs.	more		
Sciences and disciplines	11–18							24	24
Technical sciences and disciplines	21–39		123					861	984
Health, medical and pharmacological sciences	51–53							176	176
Social sciences, disciplines and services	61,67,71–73		20	628				606	1 254
Economics	62,65							36	36
Pedagogy, teaching and social care	74,75			15					15
Disciplines on culture and arts	81,82							937	937
Total			**143**	**643**				**2 640**	**3 426**

Tab. 10.2: Lifelong Learning courses at BUT (numbers of participants)

11



RESEARCH, DEVELOPMENT, ARTISTIC AND OTHER CREATIVE ACTIVITIES

11.1 Implementing the Strategic Plan of the Ministry of Education, Youth and Sports and BUT. Characteristics of creative activities at BUT

BUT has been profiled for a long time as a technical research university with balanced proportions of basic, applied and contractual research. Employees of individual faculties and university institutes adapted quickly to the conditions of funding research activities by grant agencies, operational programs and international grants. This approach resulted in a relatively high number of research projects submitted to the local grant providers, such as CSF, MIT, Ministry of Interior, Ministry of Agriculture, Ministry of Education, Youth and Sports, TA CR; research contracted with cooperating companies and recently also projects from the EU structural funds of the Operational Program Research and Development for Innovations.

The research and development area (R&D) concentrated basically on the Strategic Plan of BUT for the years 2011–2015, particularly on its update for 2015. With regard to continuous improvement in the quality of scientific and research activities, support of basic, applied and contractual research and innovations, BUT tried to increase its involvement in domestic and international research cooperation and thus diversify its resources. Activities of the University and University constituent part management, academics, researchers and PhD students respected the long-term goal of BUT becoming an important educational and research institution on regional, national and international scales and enhancing its reputation.

Another BUT objective was to increase institutional funds for the long-term conceptual development of science and research. This is facilitated mainly by the higher quality of publication activity and gradual increase of applied research. With its scientific, research and creative capacity, BUT ranks among the most prestigious of Czech universities. This can be evidenced not only by the acquired R&D funds, but by the quality of outputs.

The start-up phase of CEITEC BUT – the largest research centre, was completed: the planned buildings were finished due to the grant funds and the all built infrastructure was gradually installed and put into operation. The CEITEC project brings BUT substantial technological progress in infrastructure development. The Central European Technology Institute (CEITEC) actively cooperates with the faculties and other university centres creating the potential for future cooperation in R&D. CEITEC won the important NHI II project, four major projects of H2020 and resources for CEITEC Nano – the large infrastructure project. IT for Innovations (IT4I) is another BUT centre of excellence, which is equally successful.

The year 2015 was also successful for five regional research and development centres due to the implementation of sustainability indicators and the NHI I projects, in which the regional-wide centres are involved. The SIX Centre succeeded as one of three research institutes in the project H2020 Teaming and Centrum CVVOZE in the large infrastructure project called CVVOZE Power Lab.

The aim of BUT and individual faculties was to develop and utilize the newly built research centres financed by the EU Structural Funds, to implement and become involved in projects of national providers, and to increase the efficiency of international scientific collaboration, especially in the H2020 projects. The university is gradually building a centralized backup of scientific teams that is focused on applied and contractual research. This backup is based on collaboration with industry and meets the specific research needs of the subjects of the applied sphere. In the future, it will be necessary to expand the transfer of protected scientific and research results into the applied sphere.

The results of BUT activities are also included in the Register of Artistic Outputs; in certain sections it even ranks among the most active non-art schools. The University is gaining publicity through projects dedicated to the popularization of science and by linking up with the activities of the City of Brno and the South Moravian region. BUT is significantly involved in SoMoPro – a project for top international scientists who are helping the school create competitive research teams and bring excellent scientific outputs.

The University succeeded in the TA CR Gama call and participated in the Chances project – a pilot setting of the inner grant agency. It means that the sub-projects of the faculties and constituent parts are chosen on the basis of their assessment by the Council for Commercialization. The Council consists of both of professional experts and researchers from major universities. Most of the projects possess great application potential for commercialization.

Other results of science and basic research include the interdisciplinary Artemis, Eniac, ESA, and COST projects, in collaboration with CERN and, in particular, with the successful transfer of knowledge into the application sphere. It refers mainly to laser applications, special materials for electronics, optoelectronics and optics, holography and nanomaterial applications. The industrial use of Hydal, a patented technology used in China for recycling oil, is developing positively. Some results of BUT research and development were also awarded at the International Engineering Fair.

The Czech system of R&D funding greatly depends on targeted (project) financing, which results in the considerable instability of research teams. In 2015, the share of institutional support of total resources increased; however, it is not increasing in relation to other targeted sources of R&D financing, and has remained fairly constant for several years. Institutional support is still low in relation to R&D needs.

In 2015, BUT dealt with 364 research projects funded by national providers and another 191 specific university research projects, which at least partially helped improve the doctoral studies in all accredited specializations. The basic pillar of research funding lies in the national providers

of targeted support. In 2015, the University dealt with a total of 88 GA CR projects, 140 TA CR projects (of which 17 comprised Centres of Competence that are very important and strongly application-oriented), 11 projects of the Ministry of the Interior and 5 projects of the Ministry of Agriculture. The Ministry of Education, Youth and Sports projects (MOBILITY, KONTAKT, INGO, COST, EUREKA) represented another 56 funded projects and 64 projects were funded by other ministries.

In 2015, BUT staff published 567 scientific articles indexed on the Web of Knowledge. It is gratifying that the number of publications in the first and second quartiles increased, which indicates the gradual improvement of quality of these articles. This trend is significantly facilitated by the time-proven incentive system, which remunerates the staff and PhD students with a significant share in quality publications. In 2015, BUT fully implemented the existing methodology of R&D results evaluation and participated actively in the preparation of IPN methodology.

BUT created and implemented the Strategy for Preparing Projects for the Operation Program Research, Development and Education (OP RDE) and OP Business and Innovation for Competitiveness (OP BIC). The Strategy is especially important in terms of university project proposals. It creates new opportunities to acquire interesting projects, funding and possibilities for further cooperation in the long-term development of R&D at BUT

11.2 Linking up creative and educational activities

The development and progress of educational activities is interlinked with those of creative activities; therefore, BUT seeks to link these two areas. For example, the excellent results in sciences and technology are increasingly included into the curricula of both specialized and general educational subjects.

The individual faculties and constituent parts are linking up creative and educational activities by adopting new approaches to teaching specializations in both the present and distance forms of study and by creating electronic support. They are also increasing the participation of experts from the private and government sectors. This form of education is supported by both domestic and foreign lecturers from the professional community.

Bachelor and diploma theses primarily define themes corresponding to the actual needs of basic, applied and contractual research. This area benefits from established cooperation with participating research organizations and companies. Increased attention is also paid to the evaluation of knowledge gained during internships.

An integral part of specific research projects involves the linking up of creative and educational activities. There are three types of projects at BUT which are implemented into the professional sphere and involve the participation of the majority of doctoral students. Interdisciplinary topics are addressed within Interfaculty Projects, which are entirely junior ones; therefore, the investigators and co-investigators are students. The results are defended at the annual student conferences organized by the individual faculties. Objectivity is always guaranteed by the experts working outside BUT (mostly employees of important companies); e.g. the Faculty of Information Technology gave birth to an entirely new Excel Conference @ FIT in 2015, which demonstrated a very high level and attracted the interest of the media.

11.3 Engaging students in the creative activities of BUT

The basic concepts of involving students in creative activities during the educational process is their education in the process of scientific and research work, their involvement in these activities, the individual approach to students and expanding internationalization and mobility. Students of all accredited programs are involved in creative activities through class projects and their bachelor or diploma thesis. Their topics are the follow-up component parts of the scientific and research projects. BUT students also participate in student grant competitions.

Gifted students often become members of the research teams of individual projects; from national and international grant providers to contractual research projects or technological vouchers. They use the BUT modern infrastructure built in the last operational period from the EU Structural Funds. Work on modern infrastructures and devices significantly increases the quality of graduates in the labour market, especially in technical fields.

11.4 Total targeted funds for research, development and innovation gained in 2015 and specifications of the resources invested directly into BUT grants and projects

BUT subsidies	1 034 076 K CZK
Transfer from the main researcher to BUT	394 132 K CZK
Subsidies transferred to co-researcher outside BUT	–136 790 K CZK
Refunds	–1 141 K CZK
Total	**1 290 277 K CZK**

The above data include information from the COST, CONTRACT, EUREKA, INGO, EUPRO, GA, TA CR projects, Ministries, the National Program for Sustainability I, subsidies for specific research, subsidies for international project co-financing, institutional support for the development and mobility of researchers, ERDF and H2020 projects, European and other international programs.

Tab. 11.0: Not a part of the electronic tables recorded by the Ministry of Education; used solely for the internal needs of BUT.

11.5 Scientific Conferences (co-)organized by BUT (Table 11.1)

BUT	Total number	With more than 60 participants (from total no.)	With international participation (from total no.)
Faculty of Civil Engineering	12	5	8
Faculty of Mechanical Engineering	3	0	2
Faculty of Electrical Engineering and Communication	11	11	9
Faculty of Architecture	2	0	2
Faculty of Fine Arts	2	2	2
Faculty of Chemistry	2	2	2
Faculty of Business and Management	4	2	3
Faculty of Information Technology	5	5	4
Institute of Forensic Engineering	3	2	2
Central European Institute of Technology	12	2	6
Total	**56**	**31**	**40**

Tab. 11.1: Scientific Conferences (co-)organized by BUT (numbers)

11.6 Support of doctoral students and employees in post-doctoral positions

BUT succeeded in gaining several projects that support students of doctoral programs. A part of these projects also concentrated on arranging jobs for the post-docs who help connect creative and educational activities through workshops and internal seminars. The year 2015 brought the completion of the Excellent BUT Young Scientists project and Support of Excellent BUT Interdisciplinary Team Creation project.

11.7 Share of application sphere in the creation and implementation of degree programs

The application sphere participates in the creation and implementation of BUT study programs by engaging professionals in the activities of the scientific councils of the faculties, subject boards and teaching itself. These lecturers are active in all forms of study – they can become supervisors of doctoral programs and consult on or supervise the assignments of bachelor and master theses. BUT seeks the closest possible links with industry partners both on a regional basis and in a wider context (see section 11.18).

11.8 Cooperation with industry on the development and transfer of innovations

Cooperation with industry takes place largely in the areas of project activities and contractual research on the basis of the individual faculties and university constituent parts. The Technology Transfer Centre of BUT supports these activities by preparing the terms of contracts, or by establishing contacts for new cooperation.

11.9 The number of contracts with the subject of the application sphere to utilize research, development and innovation results

The Technology Transfer Centre of BUT records a total of 42 license agreements, of which 9 were newly concluded in 2015.

11.10 The numbers of the application sphere experts participating in education (Table 11.2)

BUT	Numbers of persons
Faculty of Architecture	87
Faculty of Electrical Engineering and Communication	27
Faculty of Chemistry	7
Faculty of Information Technology	29
Faculty of Business and Management	48
Faculty of Civil Engineering	38
Faculty of Mechanical Engineering	79
Faculty of Fine Arts	6
Institute of Forensic Engineering	19
Total	**340**

Tab. 11.2: Application sphere experts participating in teaching in accredited study programs (numbers)

11.11 Numbers of specializations for which the curricula include the mandatory completion of a professional internship of at least 1 month (Table 11.3)

BUT	Numbers of specializations
Faculty of Electrical Engineering and Communication	8
Faculty of Business and Management	1
Faculty of Civil Engineering	3
Total	**12**

Tab. 11.3: Numbers of specializations for which the curricula include the mandatory completion of a professional internship of at least 1 month (numbers)

11.12 Income gained by BUT from the sale of licenses in 2015

The total income from concluded license agreements reached 1 986 000 CZK. This amount is based on the concluded license contracts and the contracts of the co-ownership of industrial property rights administered by the Technology Transfer Centre of BUT and include income from licenses and other forms of intellectual property commercialization implemented directly by individual faculties.

11.13 Income gained by BUT from contractual research and development

The amount of the incomes from the implementation of contractual (contracted) research and development reached about 15 million CZK in the case of a major activity and 151 million CZK in the case of additional activities. This is a total of about 166 million CZK.

11.14 Income gained by BUT from the paid courses developing the qualifications of application sphere staff in 2015

None recorded at BUT.

11.15 Income received as compensation for expert opinions and consultations to help the subjects of the application sphere (in the case where such income exists)

N/A (see previous point).

11.16 The number of spin-offs/start-ups supported by BUT in 2015 (Table 11.4)

BUT	Number of spin-offs/start-ups
Total	**0**

Tab. 11.4: Spin-offs/start-ups supported by BUT in 2015 (numbers)

In 2015, BUT did not support any spin-offs or start-ups.

11.17 The strategy for commercialization

BUT has been trying for a long time to access the unified protection of intellectual property, giving priority to licensing prior to the transfer of property rights. Co-ownership of the results with a third party is addressed individually with regard to a particular outcome (e.g. joint projects). Contractual arrangement focuses mainly on property rights, sharing the costs of legal protection and the distribution of revenues from the exploitation of results.

The University protects its produced results on the basis of an internal assessment of commercial potential. Protection abroad is exerted mostly by the European Patent Office or the mechanisms of the Patent Cooperation Treaty. The protected results are published in the international database EEN (European Enterprise Network), or via the Web www.spolupracesvut.cz.

11.18 Characteristics of BUT activities within and beyond the region

The Technology Transfer Centre of BUT acts as a functional platform defending the interests of the transfer community in the Czech Republic. It aims to strengthen activities in technology transfer and develop them under the name TRANSFERA.CZ. In applied research, BUT attempts to collaborate with many renowned commercial companies (Škoda Auto Mladá Boleslav, Honeywell, Bosch Diesel, FEI, IBM, Microsoft, Siemens Czech Republic, Tescan, etc.). BUT cooperates with other universities and secondary schools not only in the South Moravian region. With the help of the South Moravian Innovation Centre, BUT is involved in the innovation voucher project, not only in the South Moravian region, but also in Carlsbad, Liberec, Zlín, etc.

BUT cooperates closely with the Regional Chamber of Commerce, which helps improve the interconnection of the business and university environments. This cooperation occurs in the form of presentations, projects and contact meetings. Other forms of cooperation with industry are represented by the companies demanding specific technical solutions from the BUT faculties.

12

INTERNATIONALIZATION

12.1 Strategies of BUT to develop international relations and an international environment

The BUT strategy of internationalization is in line with the Strategic Plan of the Ministry of Education, Youth and Sports. In 2015, it was directly based on the BUT Strategic Plan for 2011–2015. The priorities for 2015 were determined by updating the Strategic Plan for 2015, mainly in the area of international relations. One of the main goals is to increase the number of students from Slavic language speaking countries in the master degree programs and continuing doctoral programs.

Another goal is to establish and support contacts with universities in Asia which have high educational and research potential, and rank among the top in international evaluations. One of the priorities of the last period is to increase the number of paying students from the whole world. This can be facilitated by the memberships of BUT in several international organizations, for example, EUA or CESAER. This goal is contingent on the increased number of accredited and actively operated study programs and courses delivered in English. Finally, especially due to geographic and linguistic proximity, there is the aim to continue the recruitment of students from Slovakia.

The university, its individual faculties and constituent parts offer study options at all levels to attract foreign students. The priority is to recruit good foreign students into master's and doctoral studies. In 2015, BUT continued to use the services and assistance of the South Moravian Centre for International Mobility (SMCIM), which is a long-standing partner of Brno universities, especially through the Internationalization of Brno Universities program. In 2015, the Centre selected 15 talented students from abroad and granted them a one-year starting scholarship. Another form of cooperation with the SMCIM is the participation of BUT in SoMoPro projects, whose aim is to bring top international scientists to Brno universities.

In 2015, BUT continued to support talented foreign students, regularly paying scholarships to 41 students to a total amount of 1 911 600 CZK. The BUT scholarship program for foreign students fundamentally promoted the processes of internationalization. Besides the key points mentioned above, the demographic composition of the scholarship recipients is also noteworthy, as well as some of their countries of origin: Russia, Ukraine, Serbia, Syria, Kazakhstan and India.

Attracting foreign students was done through BUT activities at international education fairs. Traditionally, BUT participates in the international conference and Education Fair organized by the European Association for International Education EAIE (European Association for International Education). Last year the events were held in Glasgow. In accordance with the priorities in the field of international cooperation, BUT was also present at education fairs in Asia (Taiwan – Taipei) and South America (Brazil – São Paulo, Belo Horizonte, Rio de Janeiro).

Memoranda and agreements on professional and educational cooperation with universities and other research and professional organizations and institutions include: Universidade Federal de Santa Catarina (Florianopolis, Brazil), China Three Gorges University (Hubei, PRC), Technological University of the Philippines (Manila, Philippines), College of Slavonski Brod (Slavonski Brod, Croatia), Amity University Uttar Pradesh (Noida, India Republic), University of Limerick (Limerick, Ireland), MikroTik Academy (Riga, Latvia), Business English Language School (Gozo, Malta), Institute of English Language Studies (Sliema, Malta), Academy of Public Administration in Moldova (Chisinau, Moldova), Kazan Federal University (Kazan, Russia), St. Petersburg State University of Aerospace Instrumentation (St. Petersburg, Russia), University of Belgrade (Belgrade, Serbia), Universitat Rovira I Virgili (Tarragona, Spain), Stockholm University (Stockholm, Sweden), Uzhgorod National University (Uzhgorod, Ukraine), University of California (San Diego, USA), and University of Sheffield (Sheffield, UK). A number of existing agreements and memoranda were renewed in 2015.

BUT also initiated cooperation with universities and other educational and research institutions from geographical areas where this type of important activity did not yet exist. There is also attention being paid to gaining cooperation with universities in Asia. For example, in 2015, BUT established cooperation with Hong Kong University of Science and Technology (HKUST). New cooperation with European universities that are similar to BUT in terms of expertise, structure and formal arrangement has also been established. The already existing cooperation with some of these institutions has been intensified; for example, the positively developing cooperation with Tampere University of Technology (TUT) has been supported by negotiations between the management and active collaboration of some faculties (FEEC, FSI). Close cooperation with the faculties of BUT in establishing and intensifying contacts with foreign universities and institutions is one of the main and preferred activities to result in effective international cooperation.

BUT as a significant technical university also develops other activities through its membership in international organizations aimed at developing closer and real cooperation among universities and educational or research institutions, mainly in Europe: this includeds EUA (European University Association), EAIE (European Association for International Education), CESAER (Conference of European Schools of Advanced Engineering Education and Research), and the Association of European cities and technical colleges EuniverCities.

12.2 Involvement of BUT in international educational programs, including mobility (Table 12.1)

BUT	EU programs for education and career preparation								Ceepus	Aktion	Development programs of MEYS	Other	Total
	Erasmus	Comenius	Grundtvig	Leonardo	Jean Monnet	Erasmus Mundus	Tempus	other					
No. of projects	1	0	0	0	0	0	0	0	7	1	0	0	**8**
No. of outgoing students	761	0	0	0	0	0	0	0	4	2	123	12	**902**
No. of incoming students	545	0	0	0	0	0	0	0	38	1	0	120	**704**
No. of outgoing academics	182	0	0	0	0	0	0	0	9	0	78	2	**271**
No. of incoming academics	53	0	0	0	0	0	0	3	52	0	38	80	**226**
No. of other outgoing staff	83												**83**
No. of other incoming staff	4												**4**
Subsidies in thousand CZK	23 160	0	0	0	0	0	0	0	442.4	171.8	9 000		**32 774.2**

Tab. 12.1: Involvement of BUT in international educational programs

12.3 Involvement of BUT in international research and development programs, including mobility (Table 12.2)

BUT	7. Framework Program EK + H2020		Other	Total
	total	of which Marie-Curie Actions		
No. of projects	15		66	**81**
No. of outgoing students	8		26	**34**
No. of incoming students	0		27	**27**
No. of outgoing academics and researchers	17		68	**85**
No. of incoming academics and researchers	2		12	**14**
Subsidies in thousand CZK	56 179	0	91 516.6	**147 695.6**

Tab. 12.2: Involvement of BUT in international research and development programs

12.4 Mobility of students and academic staff by country (Table 12.3)

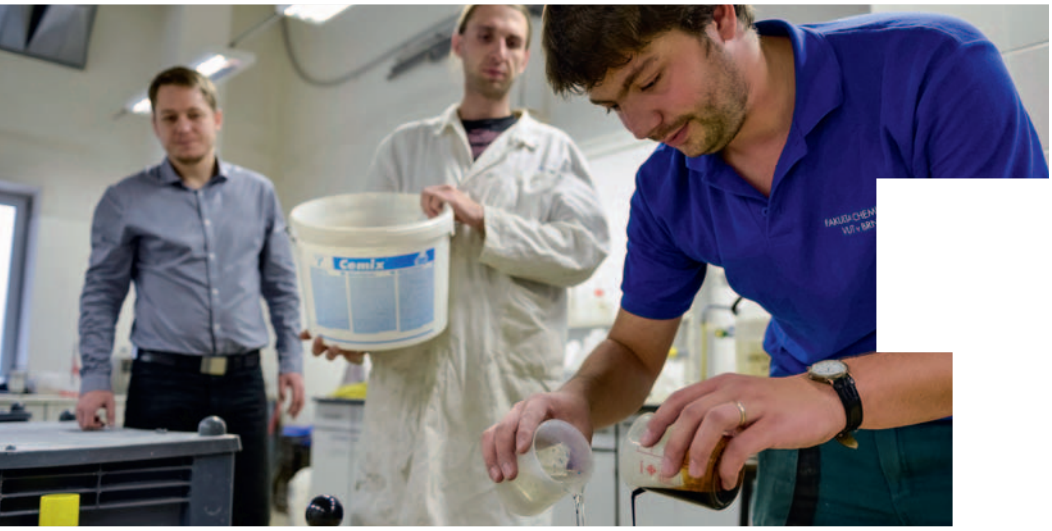
BUT Country	No. of outgoing students	No. of incoming students	No. of outgoing academics	No. of incoming academics
Australia	1			
Belgium	25	4	4	1
Belarus				2
Bosnia and Herzegovina	6		1	
Brazil	1	2		1
Bulgaria	12	20	9	27
Montenegro		4	1	2
China	1	2		
Denmark	30	3		

BUT Country	No. of outgoing students	No. of incoming students	No. of outgoing academics	No. of incoming academics
Estonia	14	7	4	
Finland	56	16	14	1
France	53	78	11	4
Croatia	5	6	6	4
India	3	4		1
Ireland	6			
Iceland	10	3		
Italy	27	26	12	1
Israel	1			
Japan	1			3
Canada				1
Kazakhstan	1	7		
South Korea		2		1
Liechtenstein	3			
Lithuania	17		6	2
Latvia	5		2	3
Hungary		1	3	3
Macedonia	1	2		
Malta	12	15	3	
Mexico				1
Moldova				1
Germany	110	25	20	14
Netherlands	21	1		
Norway	35	2		3
Poland	14	18	6	9
Portugal	43	47	7	2
Austria	112		19	19
Romania	6	3		
Russia		8		2
Greece	28	75	6	6
Singapore	1			
Slovakia	20	78	29	44
Slovenia	21	12	5	3
United Kingdom	70	7	5	9
United States of America	10	2		4
Serbia				7
Spain	42	137	12	
Sweden	31	1		2
Switzerland	14	2		2
Thai-wan	7	30		
Turkey	26	54	8	1
Ukraine				2
Total	**902**	**704**	**193**	**188**

Tab. 12.3: Mobility of students and academic staff by country

Chart 12.3 in its electronic form gives a complete listing of all the world's states. The printed version shows only the states where some form of international BUT mobility was registered in 2015.

13



QUALITY ASSURANCE AND EVALUATION OF ACTIVITIES

13.1 Internal assessment of education quality

The quality of education is monitored by the Department of Quality (DQ), which comprises a separate component of the Rector's Office and reports directly to the Rector. The DQ addresses individual faculties in the form of methodical management and support of their activities in the field of quality. This department monitors the quality of implemented core processes (i.e. quality of the management system, education, creative activities, collaboration with the external sphere and internationalization) and the quality of support processes (e.g. economic, supervisory and administrative). The DQ has a matrix type of organizational structure – each area of quality management is attended by a DQ employee in collaboration with the corresponding Vice-Rector or Bursar (in the case of the support processes).

The internal quality management system is focused on both quality assurance and quality evaluation. Quality assurance includes the systematic creation of conditions allowing the formation of a quality product or result. Quality assurance consists of process analysis, process maps creation and the establishment of key performance indicators. These activities are carried out continuously on the basis of the ISO system, whose suitability for this purpose has been verified in IPN Quality. The results obtained by the DQ are forwarded to the owners of the individual processes and the senior members of the academic management of the University for further use (e.g. for creating visions and strategies).

The EFQM Excellence Model, which was modified for the environment, activities and processes of the University, is prepared for internal quality assessment. The first experience and results were obtained in 2014. In 2015 these results were analysed in order to adapt the methodology. The results are used for the decision-making activities of BUT top management, the determination of strategy for the next period and the creation of strategic documents. Quality assurance and assessment at BUT also reflects the recommendations of the ESG 2015.

Assurance and internal evaluation of the quality of education

Systematic quality assurance and assessment of the educational process take place at all BUT faculties or constituents which provide instruction. These activities are in the jurisdiction of management, the subject councils for degree programs and courses, and course supervisors in the individual faculties/constituents. They also involve the members of the Council for Quality of BUT from the particular faculty or constituent. The interested authorities tackle any problems immediately; however, they meet regularly at the end of semester to summarize the results and experience, including the assignment of tasks leading to further improvement. Consultations always take place before the beginning of each semester in order to check the content, methodology and personnel readiness for instruction.

Further evaluation is carried out using observations, targeted pedagogic meetings and the exchange of experience among academics. The aim is to ensure the prescribed content of subjects, the methodical management of instruction and teacher performance. That is why BUT holds regular workshops and Days of Quality in order to streamline cooperation between the Rector's Office and the individual BUT parts to exchange and disseminate new knowledge and experience.

An important task was to unify the student evaluation of educational quality. To do this, BUT regularly uses different kinds of feedback ratings from external entities (graduates, employers, or even from other collaborating universities).

Regulations and recommendations for education quality management

Quality management of education is based on valid and complete BUT internal regulations, recommendations on ESG/2015, or the results of domestic and international projects in the field of education quality. These results are used to complete projects: domestic and international (e.g. IPN Q-Ram, IPN PTPO, IPN Quality, queso-SI, U-Multirank). BUT also applies recommendations and requirements of domestic and international position documents (e.g. ESG/2005, ESG/2015 and ISO international standards). The DQ staff cooperates with other universities, university representatives and the Ministry of Education to prepare amendments to the Law on Higher Education, especially in the wording of the law and other regulations related to the areas of internal and external assurance and assessment of quality or accreditation.

Implementation of ESG / 2015 recommendations at BUT

This recommendation makes cooperation with secondary schools more intensive, which leads to the improvement of knowledge of BUT applicants. Furthermore, the internal regulations in the area of education, including a quality manual, were processed and published. A detailed manual of specializations for the DS Label and ECST Label (the Diploma Supplement) was created. The implementation of the

ESG/2015 recommendations led to the design and creation of new degree programs, including courses submitted for accreditation. Instruction in a foreign language and organizing Double Degree and Joint Degree studies are strongly supported.

Some faculties have begun to implement education based on learning outcomes, including requirements on teaching style (e.g. enhanced individual approach to students, increased involvement of students in instruction, support of learning independence and initiative). In an organized and systematic way, BUT transfers its expertise to promote these new educational approaches. Interdisciplinary education, academic staff and student mobility are monitored and evaluated. Significant attention is paid to the needs of students, not only in the area of teaching, but also in the areas of counselling and the promotion of sports and health.

Involvement of students in internal evaluation

Student evaluation is an integral part of the assessment of the quality of education at BUT and is organized regularly at the end of semester. This assessment is carried out by the faculties autonomously once or twice a year by means of electronic or paper questionnaires, which focus on the content of the subjects, the method and organization of teaching, and the competence and approach of the teacher. The DQ continues to integrate student assessment into the scope of BUT and is preparing a uniform way of using its results.

Interviewing students is used to obtain the knowledge, ideas and demands of students and is contingent on appropriate and mutually open communication between the teacher and student. The results of student assessments are processed by the information system into a clear report, which is archived. Management of the departments can reflect on these results as a partial source of information for the complete evaluation of their academic staff. The survey also serves as a process by students of choosing the top 10 teachers of BUT (according to individual faculty).

Plagiarism

So far plagiarism has not been a significant problem, as topics of dissertations are assigned in a way that requires considerable independent activity of the students, who must use not only their knowledge, but also their professional skills. Everything is also monitored systematically and supervised by a competent supervisor. The DQ generally attends to plagiarism by preferring the ex ante method, which means informing and educating students and academic staff about following the requirements of general and professional ethics.

BUT has developed a method of questionnaire survey which is supposed to find out the respondents' previous experience with plagiarism. BUT is prepared to tackle any potential conflicts and findings of plagiarism using a customized system to approaching these factors.

13.2 External assessment of quality, particularly by the Accreditation Commission of the Czech Republic

The Accreditation Commission of the Czech Republic did not evaluate the quality of any BUT constituents in 2015. The last external evaluation of the EUA/IMP was performed in 2013, with this evaluation being carried out every four years. BUT regularly conducts surveys among graduates on the short- and long-term benefits of their studies. Another form of feedback is gained from systematic cooperation with the employers of graduates. The results of internal and external evaluation are used to increase the quality of the educational process, to upgrade and modernize the content of subjects, to modify the methodological guidance of instruction and to increase the pedagogical competencies of BUT employees.

13.3 Financial audit at BUT in 2015

A financial audit was conducted in accordance with law no. 320/2001 Coll., On financial control and the follow-up on the internal standards of the University. BUT has established a risk assessment process. In 2015, a map of risks was elaborated, covering both individual constituent parts and the university as a whole. Negotiations to identify the risks and assess the degree of their seriousness took place at the Risk Management Committee of the University, an advisory body of the Rector. Based on the evaluation of the risk map, an annual plan of internal audits and controls was adopted.

In 2015 the Department of Inspection and Internal Audit of BUT conducted 28 audits and controls. The planned internal audits were focused on OP SRDI projects implemented at BUT in priority axes from 1 to 4, where the University acted as the recipient and partner of the grant.

The internal audit was based on financial transactions and operations from SAP IS BUT, with the volume of the basic sample being 3.5 billion CZK. Verification was conducted on a sample from a random selection of transactions in a total volume of 1.4 billion CZK (approximately 41% of the stated basic file).

Internal audits had three main goals:

Distribution of material obligations following the annex Decision on the Grant and Payment – in the case of already completed projects.

System settings – expenses were verified on a sample of operations during the audit period – in the case of projects in the phase of their implementation.

Audit plan – included projects that have already entered the phase of sustainability. The results and findings were subsequently discussed by BUT management, which adopted the necessary measures.

13.4 Certificates of quality

In 2015, the first successful re-certification audit of the quality management system according to international standard ISO 9001: 2009 Quality Management Systems – Requirements was successfully carried out at BUT. The second surveillance audit, in accordance with this standard, was successfully carried out at the Faculty of Business and Management. The first surveillance audit, following the same standard, was carried out at the Faculty of Mechanical Engineering. Reports from these external audits contained no disagreements or comments, only recommendations for the further improvement of operations.

Following the quality assurance of the BUT management system, the area of management system certification will expand at the Faculty of Electrical Engineering and Communication. In 2015, preparatory activities were begun to ensure the compliance of the faculty management system with this international standard.

Rectorate and other BUT constituent parts

The first re-certification audit by an independent and accredited certification body was carried out in this part. The audit did not find any systemic disagreement or provide any comments; it only emphasized the strong points and recommended improving the quality of the management system. The audit was carried out on 23 and 24 November 2015. The Apollo information system contains an almost complete assignment for the software optimization of process management at BUT, including linking up with the existing IS (the Processes module).

The internal audits of the quality of the management system evaluated whether the established approach, main documentation and supporting records continued to meet the needs of BUT. These internal audits are expected to bring the highest added value of information on the status of the process.

Faculty of Business and Management

In 2015, the second surveillance audit conducted by an independent and accredited certification body was carried out at the Faculty of Business and Management. The audit did not find any systemic disagreement or provide any comments; the audit emphasized the strong points and recommended improving the quality of the management system. This second surveillance audit was carried out on 29 and 30 October 2015.

Faculty of Mechanical Engineering

In 2015, the first surveillance audit conducted by an independent and accredited certification body was carried out at the Faculty of Mechanical Engineering. The audit did not find any systemic disagreement or provide any comments; the audit emphasized the strong points and recommended improving the quality of the management system. The first surveillance audit was carried out on 2 and 3 December 2015.

Faculty of Electrical Engineering and Communication

An analysis of the management system meeting the requirements of Quality Management Systems – Requirements ISO 9001: 2009 was begun at the Faculty of Electrical Engineering and Communication. The selection procedure to choose an external, independent and accredited certification body was also implemented.

The Department of Quality at BUT continues to participate in organizing national meetings of employees of these departments at Czech universities. The most regular participants comprise the representatives of the Czech Technical University, Masaryk University, Janacek Academy of the Performing Arts and the Technical University of Ostrava.

13.5 Benchmarking with similarly oriented universities in the Czech Republic, or those abroad, if necessary

Benchmarking

In 2015, BUT did not participate in any international benchmarking because of the distance between the locations of their events and the high costs associated with participation. Instead, BUT engaged in multiple benchmarking with Czech universities within individual national projects, particularly the KREDO project.

Ranking

Four faculties of BUT, as well as the university as a whole, participated for the second time in the international questionnaire U-Multirank, providing feedback to the authors about the methodology employed. BUT was involved in the first round of sharp international assessment. The obtained results were analysed and implemented into modifications of some management and decision-making processes. In 2015, BUT also continued international cooperation with the U-Multirank team, especially in assessing the validity of the results and modifying the methodology, particularly in the field of survey indicators and their mathematical/informatics processing. BUT participated in the preparatory discussions on the possibility of and need for changes in survey indicators, so that they could better match the documentation convention of Czech universities.

BUT systematically monitors the content, progress and results of other international rankings and compares their strengths and weaknesses.

13.6 Assessment of educational activities performed outside the University complex

Educational activities performed outside the BUT complex were not evaluated because the university does not have any branches.

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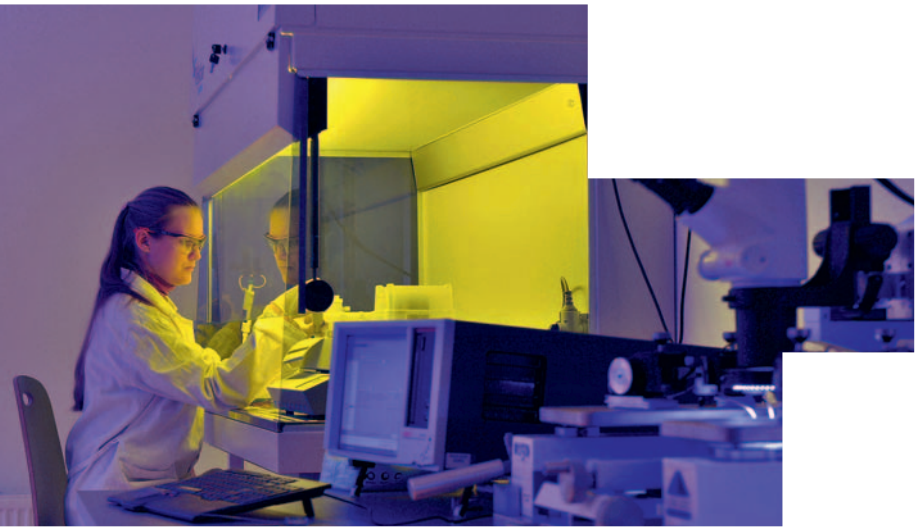

BUT NATIONAL AND INTERNATIONAL EXCELLENCE

14.1 BUT membership in international associations and organizations

International organization	State
Academy of International Business	USA
Academy of Materials and Manufacturing Engineering	POL
ACM	USA
Advisory Group for Aeronautics in FP6, Brussels	BEL
AESOP (Association of European Schools of Planning)	EU
AIB (Academy of International Business)	USA
Air Infiltration and Ventilation Centre	EU
American Ceramic Society	USA
American Vacuum Society	USA
ASM (American Society for Materials)	USA
ASME	USA
Berkeley Initiative in Soft Computing	USA
CESAER (Conference of European Schools of Advanced Engineering Education and Research)	USA
CEWS (Centre of Excellence Women and Science)	DE
CIB (International Council for Building)	NED
Cisco Networking Academy	USA
Danube Rectors Conference	AUT
DoCoMoMo (International Documentation and Conservation Modern Movement)	PRT
EAAE (European Association for Architectural Education)	EU
EACES	UK
ECSB (European Council for Small Business)	EU
EIASM (European Institute for Advanced Studies in Management)	BEL
EIBA (The European Business Academy)	BEL
Electrochemical Society	USA
ELIA (European League of Institutes of the Arts)	EU
EMAC (The European Marketing Academy)	EU
EPWS (European Platform of Women Scientists)	BEL
EQAR (European Quality Association for Recycling)	EU
ESEM (European Society for Engineering and Medicine)	EU
EUPRIO	EU
European Association for Accident Research and Analysis	EU
European Association of Language Testing and Assessment	UK
European Biometrics Forum	EU
European Society for Artificial Organs	EU
European Structural Integrity Society	EU
European University Association	EU
FIP (Federation for Structural Concrete)	CHE
GBATA (Global Business and Technology Association)	USA
Gesellschaft für Informatik	DE
Heat Transfer Education Committee ASME	USA
IABSE (International Association for Bridge and Structural Engineering)	CHE
IASS (International Association for Shell and Spatial Structures)	ESP
ICAS (International Council of the Aeronautical Science)	DE
IEA (International Energy Agency)	FRA
IEEE (Institute of Electrical and Electronics Engineers)	USA

International organization	State
IFToMM (International Federation for the Promotion of Mechanism and Machine Science)	POL
International Institute of Forecasters	USA
International Journal of Applied Research in Business Administration and Economics	AUS
International Journal of General Systems	USA
International Project Management Association	EU
IUVSTA	CAN
Journal of Enterprise Resource Planning Studies	USA
Journal of Global Business and Technology	USA
International Committee for Summer Conferences on Topology and Applications	EU
PRIME Networking	BEL
REHVA (Federation of European Heating and Air-Conditioning Association)	BEL
SIETAR (Society for Intercultural Training, Education and Research)	UK
Society of Computational Economic	USA
Society for Material Research	USA
The International Society of Difference Equations	USA
Transformation in Business and Economics	USA
UNESCO/UIA - Validation Committee for Architectural Education	LV
WTA (International Wissenschaftlich-Technische Arbeitsgemeinschaft für Bauwerkserhaltung und Deenkmalpflege)	DE

14.2 BUT membership in professional associations and organizations

Professional organizations
ACM
Association of University Libraries Czech Republic (AKVŠ)
AMSAT-DL
AMSE
AS – International
Association of designers of Moravia in the Czech Union of Artists
Association of Mechanical Engineers
Association of Experts and Appraisers of the CR
Centre for Research on Information Systems (CSSI)
CESNET
CIRED
Cisco Networking Academy
CREA Hydro&Energy
Czech and Slovak Society for Soil Mechanics and Geotechnical Engineering
Czech Concrete Society
Czech Physical Society
Czech Chamber of Chartered Engineers and Technicians in Construction
Czech Logistics Association
Czech Marketing Association
Czech Foundry Society
Czech Chemical Society
Czech Society for Quality

Professional organizations
Czech Society for Cybernetics and Informatics (CSKI)
Czech Society for Mechanics
Czech Society for Nondestructive Testing
Czech Welding Society
Czech Vacuum Society
Czech Society for New Materials and Technologies
Czech-Moravian Electrical and Electronic Association
Czech National Committee for Hydrology
Czech Standards Institute
Czech Association of Civil Engineers
Czech Association of Scientific and Technical Societies
DeviceNet Organization
DILIA
EUNIS-CZ
European Biometrics Forum
European Space Agency
European Taxation and Accounting in Practice
Gesellschaft für Informatik
IFAC
IMAPS Czech and Slovak chapter
Institute of Electrical and Electronics Engineers
International Society for Optics and Photonics
International Society of Electrochemistry
International Solar Energy Society
International Union of Radio Science
International Union of Testing and Research Laboratories for Materials and Structures
Railway Infrastructure Interoperability
Engineering Academy of the Czech Republic
Union of Czech mathematicians and physicists
LonWorks Association
Moravian Association of Women Entrepreneurs
National Association of experts and institutions involved in the transfer of knowledge and technology
P-Net
Working group for the preparation of ISO 26000
Association of libraries
Association for railways
Association for Concrete Structures
Association of Accountants and Tax Advisors
Society for Ethics in Economics
Association for Project Management
The Society for the radio-electronic engineering
Society for Environmental Technology
SUAleph
Association of Czech Booksellers and Publishers
Technical Committee of the International Standardization Organization
Technological platform energy security

Professional organizations
The European Confederation of Language Centres in Higher Education
The European Marketing Academy
World Road Association PIARC
WTA International
World Road Association PIARC
WTA International

14.3 National and international awards (effective in 2015)

In 2009, BUT received the prestigious certificates of the European Commission – the ECTS Label and DS Label. The validity of these certificates was subsequently extended for the period 2013–2016. The ECTS Label contributes to the internationalization of the University and ranks among the most prestigious European awards in the field of tertiary education.

BUT also ranked very well in the international comparisons of the QS World University Rankings. BUT occupied places between 601st and 650th and scored especially well in the field of Engineering & Technology (262nd place), and in the category of Structural and Civil Engineering (between 101st and 150th place).

Shortly after improving its position in the QS World University Rankings, BUT succeeded in the ranking of the British journal Times Higher Education (THE). In this ranking, BUT occupied places between 40th and 500th place, along with Charles University in Prague and the Technical University in Ostrava, which ranked among the top three Czech universities in this international comparison.

The Faculty of Mechanical Engineering gained second place in the nationwide ranking School of the Year Recommended by Employers. Individual faculties were reviewed by more than 230 companies and organizations, including major employers such as Škoda Auto, ČEZ and T-Mobile.

BUT was also successful in marketing: according to the magazine MarketingSalesMedia and Médiář, the recruitment campaign of BUT ranked as the 13th best advertisement of 2015. In the Top 25 Charts, BUT was the only university which attracted the attention of experts from the advertising industry. The BUT campaign even surpassed those of such prestigious brands like Škoda Auto, Kofola and Pilsner Urquell. The BUT "FU" campaign also took 6th place in the Crystal Loupe competition, which is the Prize of the Czech Internet (in the category Marketing Inspiration).

14.4 Rating of BUT conducted by a team of international experts (international accreditation)

There was no accreditation process at BUT in 2015.

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DEVELOPMENT OF BUT

15.1 Involvement of BUT in the Centralized Development Projects of the Ministry of Education, Youth and Sports (Table 15.1)

BUT	No. of accepted projects	Provided funds (grants) in thousand CZK	
		Capital	Conventional
Program to support cooperation among universities	3	1 980	585
Total		**1 980**	**585**

Tab. 15.1: Involvement of BUT in the Centralized Development Projects of the Ministry of Education, Youth and Sports in 2015

15.2 Institutional Development Plan of BUT (Table 15.2)

BUT	Provided funds (contribution) in thousand CZK		Achievement of targets/indicators	
Institutional Development Plan	Capital	Conventional	Initial state	Target state
Effective management				
1.1 Support of strategic and quantitative analyses for the development of BUT	0	1 200	Plan of analyses	Evaluation of SWOT analysis; definition of priorities for 2016; external environment analysis; process analysis
1.2 Preparation of mid- and long-term conception	0	1 300	Initial proposition	Medium and long term conception and strategy – preparation of guidelines; discussion in BUT management; definition of the guidelines in the study; research and development areas
1.3 Strengthening the role of strategic approaches to the long term objectives of the institution by the development of the Department of Strategic Management and Development	0	1 300	Zero	Organizing a working group; analysis of possible methods and approaches; activity evaluation analysis
Quality and relevance				
2.1 Building the quality system of BUT and its constituent parts in 2015	0	3 000	Certification of the rectorate and its components completed according to ISO 9000: 2009 for 2013–2015; 1st surveillance audit at FBM; certification audit at FME	Establishment of a working group for a selection of the information subsystem; 1st recertification audit of the rectorate and its components; 2nd surveillance audit at FBM; 1st surveillance audit at FMI
2.2 Implementation conclusions and EUA recommendations	0	1 000	Advisory body opinion of implementation of EBA recommendations	Revision of the EUA recommendation reflecting the changes which are likely to be introduced by the new Higher Education Act; preparation of BUT steps in further re-evaluation/ evaluation
2.3 Promoting excellence of publishing activities at BUT	0	15 000	355 publications in WoS	439 publications in WoS
2.4 Support of 1st year students	0	3 500	Zero	546 students
2.5 P Support of talented students	0	1 700	158 supported students; 7 team projects; 62 publishing activities; presentations and participation in competitions	241 supported students; 22 team projects; 92 publishing activities; presentations and participation in competitions

BUT	Provided funds (contribution) in thousand CZK		Achievement of targets/indicators	
Institutional Development Plan	**Capital**	**Conventional**	**Initial state**	**Target state**
2.6 Support of the activities of the Department of Marketing and External Relations	0	1 000	5 competitions for high school students; 15 projects for BUT students; 50 supported students	5 competitions for high school students; 15 projects for BUT students; 85 supported students
2.7 Support of Lifelong Learning Institute activities for the academic community	0	1 800	1 000 course participants, 90 scheduled courses	1 608 course participants, 184 courses
2.8 Support and development of library services	0	1 300	40 000 University Portal visits; 175 fans on Facebook; 20 000 repaired bibliographic records; 29 000 stored digital documents; 20 000 accesses to the repository.	50 000 University Portal visits; 250 fans on Facebook; 30 000 repaired bibliographic records; 35 000 stored digital documents; 35 000 accesses to the repository.
2.9 Development of the educational computer network and the main data centre	1 100	1 400	4 297 diplomas before 1998 in the database; 2 000 interconnected private networks of IPv4 address	6 913 diplomas before 1998 in the database; 4 706 interconnected private networks of IPv4 address
2.10 Career systems, career development and code of ethics	0	1 000	Preparatory work	Approved Code of Ethics for academics; preparation of the expansion of the Code of Ethics for non-academic staff
2.11 Action plan 2015+	0	2 100	Zero	13 workshops leading to Cooperation between universities and the private sector; discussion forums with representatives of industry; database of alumni, website for graduates
2.12 Support of BUT self-government and autonomy	0	500	Zero	Best BUT Teachers competition; cooperation with BUT management to simplify specific research management; designs of electronic tools to enhance direct awareness
Outreach				
3.1 Support of marketing and presentation of BUT in the Czech Republic and abroad	0	2 500	2 domestic and 5 international fairs; web campaign efficiency – 1 500 applications	4 international fairs; web campaign efficiency – 5 000 applications
3.2 Support of Joint Master Degree programs at BUT and the increase in the number of study programs delivered in foreign languages	0	1 700	5 study programs in English; 0 supported students	Accreditation of the new double degree specialization; 9 study programs in English; 21 supported students
3.3 BUT cooperation with primary, secondary and higher vocational schools	0	1 200	5 competitions for students of primary and secondary schools; 15 presentations, field trips and workshops for secondary schools	5 competitions for students of primary and secondary schools; 38 presentations and field trips for secondary schools; 7 courses and workshops
3.4 Support of international cooperation	0	4 000	50 bilateral contracts, sub-contracts and framework international contracts (new and renewed)	130 bilateral contracts, sub-contracts and framework international contracts (new and renewed)
3.5 Support of international mobility of BUT academic staff	0	2 200	35 outgoing persons; 16 incoming persons	78 outgoing persons; 38 incoming persons
3.6 Support of international mobility of BUT students	0	5 000	320 student-months	405 student-months
3.7 Support of handicapped applicants to BUT	0	1 000	850 provided services over all; 300 individual consultations; 550 group activities	2 192 provided services over all; 1 633 individual consultations; 559 group activities
3.8 Support of U3A development	0	800	2 361 students	2 640 students

BUT	Provided funds (contribution) in thousand CZK		Achievement of targets/indicators	
Institutional Development Plan	**Capital**	**Conventional**	**Initial state**	**Target state**
Efficiency and Financing				
4.1 Development of risk management	0	1 000	Zero	Creating structure of risk management system, implementing risk analysis
Inner competition				
Inner competition	0	9 260	0 supported projects	97 supported projects
Total	**1 100**	**65 760**		

Tab. 15.2: Institutional Development Plan of BUT in 2015

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ACTIVITIES OF THE ACADEMIC SENATE OF BUT

In 2015, there were 10 regular and 1 exit sessions of the Academic Senate (AS) of BUT. The AS dealt with standard issues such as legislative, economic, educational and creative activities. The AS discussed and approved amendments to the internal regulations of the university, faculties and institutes, the Code of Ethics and other documents of the university institutes, which are covered by the AS. Substantive discussions related to significant changes in the rules of budgeting and the subsequent approval of the BUT budget for 2015 in the new form of "living tables", which facilitate complementary analyses.

In connection with the long-term strategy of BUT, the AS addressed property-issues (purchase, sale and exchange of real estate, easements), and was informed in detail about a number of new analyses concerning mainly major projects and investments of the previous year. The AS discussed and approved the annual reports on BUT activities and management in 2014, the Update of the Strategic Plan of BUT for 2016 and the Long-term plan of BUT for the years 2016–2020. Prior to the negotiations in the AS, all subjects were analysed in detail in working committees.

In 2015, the **Legislative Commission of the AS of BUT** (hereafter LC) held three meetings at which it accepted recommendations for the AS, mainly the amendment of the internal regulations of the University, faculties and institutes, and recommendations for the guidelines concerning the admission process to the University institutes. LC continued its important cooperation with the Law Department of BUT.

Economic Committee of the AS of BUT (hereinafter the EC) held 23 sessions, where it discussed the annual report on management of 2014 and recommended it for approval by the AS. The EC, in cooperation with the Bursar, prepared a proposal of the budget rules and subsequently the budget proposal for 2015. Both documents were prepared as detailed and transparent financial flows, presenting the structure of BUT funding and the budget in terms of resources, and showing the share of BUT constituent parts on the amount of finances that the University receives. These documents evidence the shares of the individual faculties in financing centralized activities and set desirable economic behaviour and management together with the incentives leading to this behaviour, particularly with regard to external incentives. Furthermore, the EC discussed in detail some property rights issues and recommended them for approval by the AS.

Pedagogical Committee of the AS of BUT convened three sessions dealing mainly with the guidelines for admissions to CEITEC BUT and IFE, and accreditation of their study programs.

Committee for Creative Activities of the AS of BUT convened ten standard sessions. It concentrated mainly on the application of the results in the Section for Science, Research and Innovations; in cooperation with the vice-rector for the development of scientific and research activities, it was concerned with specific research funding, especially in inter-faculty specific research projects.

At the exit meeting held in Mikulov in June, the AS discussed and approved a legislative amendment of BUT Status – Attachment no. 1 (change of logo and the unified visual style of BUT) and discussed the preparation of the amendment of the Electoral Rules. Further discussion dealt with economic issues (preparation of the budget for 2016) and the creative activities of BUT. The exit meeting also included the development project seminar Support of University – Self-government and Autonomy, and was visited by the Chair of the AS of the Czech Technical University in Prague and the highest representatives of the Higher Education Council (HEC).

The representatives of HEC provided the AS with detailed information about the meetings of the HEC Presidium and Assembly. Pavel Popela, PhD, AS member who is the chairman of the HEC Working Committee for strategies and development, continued to participate in the intense negotiations concerning the completion of the amendment to the Higher Education Act, both in joint negotiations with the Legislative Commission of HEC and as a nominee of the Working Committee of MEYS, which was established to prepare the Higher Education Act amendment.

The negotiations of these working committees were also attended by M.Sc. Roupec, who was delegated as a representative of the AS of BUT in HEC (he is also a member of both above-mentioned commissions of HEC). Prof. Vávrová participated in the negotiations of the Academy of Sciences Assembly, where she was delegated by HEC. Thanks to this nomination she was active in the supervisory body of HEC. Assoc. Prof. Hanáček, chair of the AS, attended the sessions of the working committee of HEC also in 2015.

The Student Chamber of BUT (hereinafter SC) focused on five major projects. In cooperation with IAESTE, the student chambers of individual faculties and other BUT student organizations, the SC created a traditional guide for first year BUT students (a student diary was published in an edition of 12 000 copies). The SC continued the Intern fund to support student projects and implemented a student survey of the best BUT teacher. In November, the SC organized an academic conference of senators from across the country and in December it successfully organized the BUT Christmas Ball for 1 500 visitors. SC members also participated in various working committees, e.g. the Supervisory Board of the BUT Food and Housing Division, and cooperated in the evaluation of specific research projects. SC representatives participated in the workshop and other activities of the SC of HEC.

Documents discussed at the AS sessions in 2015

Legislation:

- Rector's decision – Appointment of Disciplinary commission of BUT [JANUARY, FEBRUARY]
- Code of Ethics of BUT [JANUARY, FEBRUARY]
- Fees connected to the admission procedure at BUT [FEBRUARY, MARCH]
- Amendment no. 8 of the Statute of BUT – amendments to Annex no. 1 (change of the logo and the uniform visual style of BUT) [MAY, JUNE]
- Preparation of the amendment of the Electoral Rules of AS of BUT [JUNE, SEPTEMBER, OCTOBER]
- Amendment no. 1 to the Statute of the FFA of BUT – Annex no. 3, Organization Chart of the Faculty of Fine Arts [SEPTEMBER, OCTOBER, NOVEMBER]
- Amendment no. 1 to the Statute of the FFA of BUT – Annex no. 2, Organization structure of the FFA of BUT [SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER]
- Amendment no. 1 to the organizational order of BUT Rector's Office [DECEMBER]

Economic Affairs:

- Rules of budgeting and management of BUT 2015 [JANUARY, FEBRUARY]
- Property-rights issues – CEITEC; Easement in the Ponava cadastre; completion of the in-kind contribution to the company STP Brno, Inc. [JANUARY]
- Supplement no. 1 to the Rules of Budgeting and Management of BUT in 2015 [MARCH]
- Budget of BUT for 2015 [APRIL, MAY]
- Request for a consultation on the sale of shares of INVEA-TECH, Inc. [JUNE, SEPTEMBER, OCTOBER]
- Property-rights issues – easements; assent to the conclusion of the donation agreement between BUT and the City of Brno (transferring of BUT land in the Medlanky cadastre to city ownership); contract between BUT and the City of Brno [SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER]
- Rules of budgeting and management of BUT for 2016 [DECEMBER]

Creative activity:

- Composition of the Scientific Council of IFE [JANUARY, FEBRUARY, MARCH]
- Annual report of the internal fund of the student projects 2014 [FEBRUARY]
- Change in staffing of the Scientific Board of BUT [MAY, JUNE]
- Composition of the Scientific Council of CEITEC BUT [OCTOBER, NOVEMBER]
- Rules of the Internal Fund of Student Projects of BUT [DECEMBER]
- Rector's Directive no. 5/2015 - Rules of the Student Grant Competition [DECEMBER]

Pedagogical issues:

- CEITEC BUT Directive no. 1/2015 for admissions to the DSP for the academic year 2015/2016 [JANUARY, FEBRUARY]
- Extension of accreditation for NMSP N3917 – Forensic Engineering [MARCH]
- Extension of accreditation DSP – P3917 – Forensic Engineering [SEPTEMBER, OCTOBER]
- Accreditation of Inter-university DSP CEITEC BUT Life Sciences in connection with advanced materials [OCTOBER, NOVEMBER]
- Guidelines for admissions to the DSP at CEITEC BUT for the academic year 2016/2017 [NOVEMBER, DECEMBER]
- IFE directive no. 1/2015 for admissions to the IFE NMSP N3917 – N3950 and Forensic Engineering and N3950 – Risk Engineering – for the academic year 2016/2017 [NOVEMBER, DECEMBER]

Other important documents and negotiations of the AS of BUT:

- Information of CEITEC BUT [FEBRUARY]
- Update of the Strategic Plan of CESA for 2015 [FEBRUARY, MARCH, MAY]
- Annual report on the activities of BUT in 2014 [MAY]
- Annual economic report of BUT for 2014 [MAY, JUNE]
- CEITEC BUT and the continuation of construction [MAY]
- Update of the Strategic Plan of IFE for 2015 [MAY, JUNE]
- Rector's proposal for appointing members of the Ethics Committee of BUT [MAY, JUNE]
- Long-term plan of BUT for 2016–2020 [SEPTEMBER, OCTOBER]
- Update of the Long-term plan of BUT for 2016 [SEPTEMBER, OCTOBER]
- Update of the Long-term plan of CEITEC BUT for 2015 [OCTOBER, NOVEMBER]

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CONCLUSION

In 2015, Brno University of Technology ranked among the top 4% of universities in the world (according to World University Ranking), which is evidenced by the teaching, scientific and research activities of this institution. BUT faculties and constituent parts concentrate not only on technical disciplines, but also on architecture and fine arts, proving that BUT is a dynamic university responsive to new knowledge, inventions and artistic orientations, whose aim it is to educate quality graduates and achieve excellent results in research and development. Special thanks go not only to our students, educators and researchers, but also to other university employees; if it was not for their selfless work, BUT could not boast the series of successes that are described in the preceding pages.

Despite the demographic decline and high intensity of study, the faculties have succeeded in maintaining the interest of their students, who still find the technical fields attractive. BUT constantly strives to update its teaching activities by introducing new knowledge, innovating and adapting them to meet the needs of practice. The key approach to the innovations of the BUT degree programs is not only the quality of the graduates, but also the applicability of their skills in practice. Another goal is to enable talented students and young colleagues to travel abroad, study there and compare the quality of BUT and its faculties in direct competition with the students, teachers and researchers of the visited universities. BUT regularly allocates substantial resources from its budget to promote these activities.

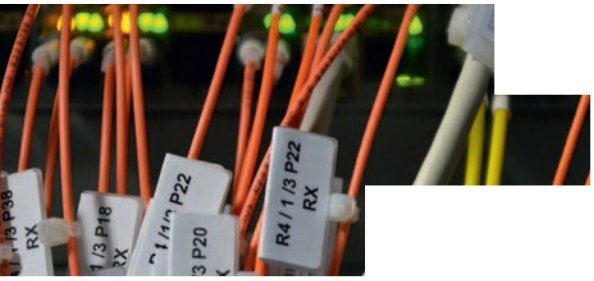
One of the major successes of 2015 was the cold commissioning of CEITEC, whose construction had been suspended for more than one year. That meant meeting the monitoring indicators in terms of R&D. The new premises will become a place where quality research will be implemented and where BUT students, teachers and researchers will utilize modern technologies and devices.

2015 was also the year of changing the university visual style, which had been discussed for more than 5 years. Most like the new style; however, there are some who remain nostalgic for the original logo. In any case, the new visual style makes BUT "more visible" in the modern media and on the Internet.

The Long-term Plan (LTP) of educational, scientific, research, development, innovation, artistic and other creative activities and its update and the Institutional Plan (IP) comprise a traditional part of the strategic management of the university. This Annual Report is proof that the goals outlined in the update of the LTP for 2015 were met, along with the entire plan for the years 2011–2015 and the goals of the IP. The funds were used to develop the key areas in the scope of the whole University.

In 2015, the Long-Term Plan for 2016–2020 was prepared and updated for 2016. In the second half of 2015, these documents were discussed in the Scientific Committee of BUT and approved by the AS. In January 2016, both documents were discussed and approved by the Ministry of Education, Youth and Sports.

The year 2015 was demanding and hectic for BUT, which was partially caused by the debate on the new Higher Education Act, in which the academic staff of the University actively participated. Hopefully, 2016 will be a more serene, yet no less a successful year.



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