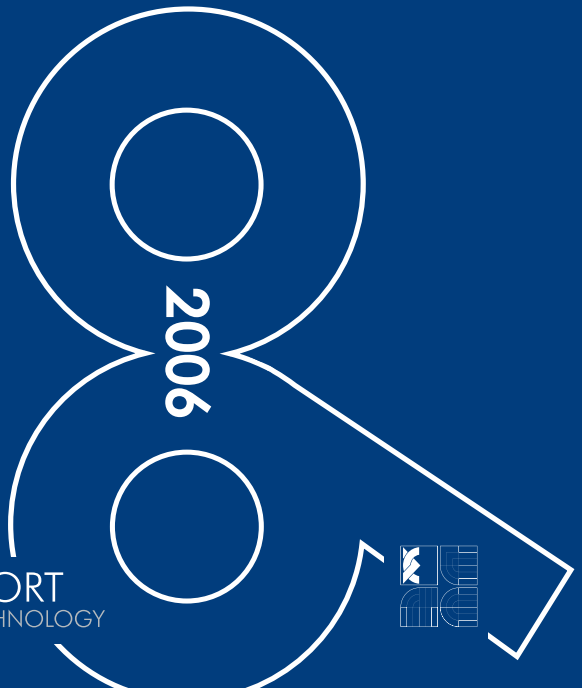


ANNUAL REPORT
BRNO UNIVERSITY OF TECHNOLOGY

ANNUAL REPORT

ON THE ACTIVITIES OF BRNO UNIVERSITY OF TECHNOLOGY

TABLE OF CONTENTS

This annual report is being submitted in conformance with the Higher Education Act no. 111/1998 Coll. Its structure is given by the Guidelines for Describing University Activities in 2006 issued by the Ministry of Education, Youth, and Sports. It presents to a wider public data on and major outcomes of all the activities carried out by Brno University of Technology as a Czech and international university and place of research.

1. INTRODUCTION

1. 1. Full Name of the Public Higher-Education Institution, Acronym Used, Address, Names and Addresses of all Faculties

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

Faculties:

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

Faculty of Electrical Engineering and Communication, FEEC,
Údolní 244/53, 602 00 Brno
www.feec.vutbr.cz

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

Faculty of Information Technology, FIT,
Božetěchova 1/2, 612 00 Brno
www.fi t.vutbr.cz

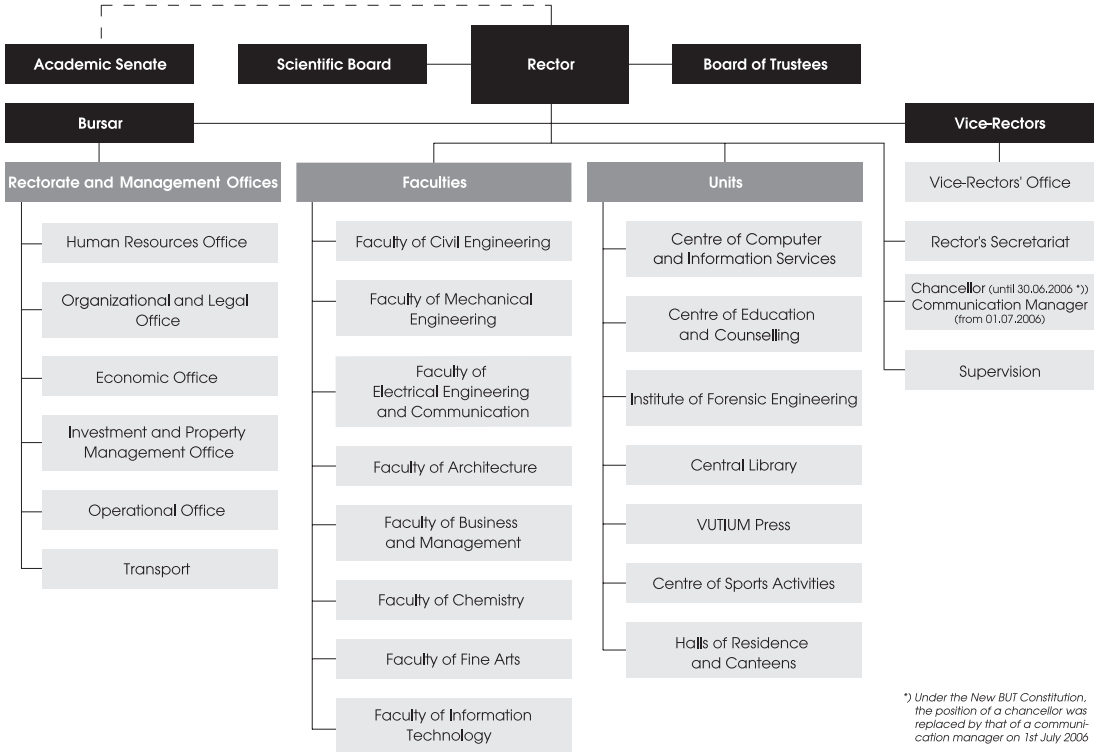
Faculty of Business and Management, FBM
Kolejní 2906/4, 612 00 Brno
www.fbm.vutbr.cz

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

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

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

1. 2. Brno University of Technology Organisational Chart



1. 3. BUT Scientific Board and Academic Senate

BUT Scientific Board

Name	Position, workplace	Field of research
prof. RNDr. Vladimír Aubrecht, CSc.	vice-dean, BUT FEEC	physics of plasma
prof. Ing. Vladimír Báleš, DrSc.	rector, Slovak Technical University	chemical engineering
prof. Ing. Jan Bujňák, CSc.	rector, University of Žilina	steel and concrete structures
prof. RNDr. Milan Češka, CSc.	vide-dean, BUT FIT	information technology

Ing. Ivan Dobiáš, DrSc.	Czech Academy of Sciences, Institute of Thermomechanics	non-linear dynamic systems
Ing. Jaroslav Doležal, CSc.	Honeywell, s. r. o.	management automation
prof. Ing. Rostislav Drochytka, CSc.	vise-dean, BUT FCE	construction materials engineering
prof. RNDr. Miloslav Druckmüller, CSc.	BUT FME	applied mathematics
prof. Ing. Jaroslav Fiala, CSc.	vice-rector, BUT	materials sciences and engineering
Ing. Josef Hájek	Skanska DS, a. s.	design and transport sciences
prof. Ing. Jan M. Honzík, CSc.	vice-dean, BUT FIT	information technology
Ing. František Hrnčíř	ABB Lummus Global, s. r. o.	power and process plants
Mgr. Tomáš Hruda	Czech Invest Praha	project manager
prof. Ing. Tomáš Hruška, CSc.	dean, BUT FIT	information technology
prof. RNDr. Josef Jančář, CSc.	BUT FC	macromolecular chemistry
prof. Ing. Pavel Jura, CSc.	vice-rector, BUT	cybernetics, automation, and measurement
RNDr. Petr Kantor	AutoCont CZ, a. s., Brno	mathematical informatics and theoretical cybernetics
prof. Ing. Jiří Kazelle, CSc.	BUT FEEC	electrical and electronic technology
prof. RNDr. Michal Kotoul, DrSc.	vice-rector, BUT	applied mechanics
prof. Ing. Vladimír Kučera, DrSc.	Czech Technical University in Prague, Faculty of Electrical Engineering	technical cybernetics
prof. Mgr. František Lesák	Weidnanngasse 28, Wien	fine arts
prof. RNDr. Miroslav Liška DrSc.	BUT FME	applied physics
doc. RNDr. Petr Lukáš, CSc.	director, Academy of Sciences, Institute of Materials Physics	materials physics
prof. Ing. Ladislav Musílek, CSc.	vice-rector, Czech Technical University in Prague	experimental physics
prof. Ing. arch. Alois Nový, CSc.	vice-rector, BUT	architecture
prof. Ing. Drahomír Novák, DrSc.	BUT FCE	structure mechanics, reliability of structures
prof. Ing. Ladislav Omelka, DrSc.	vide-dean, BUT FC	physical chemistry
prof. Ing. Emanuel Ondráček, CSc.	advisor to rector of BUT	mechanics of solids, computer mechanics
prof. Ing. Karel Rais, CSc., MBA	rector, BUT	business and management

prof. Ing. Petr Sáha, CSc.	rector, Tomas Bata University in Zlin	materials engineering
prof. PhDr. Jan Sedlák, CSc.	BUT FFA	architecture
prof. RNDr. Eduard Schmidt, CSc.	Masaryk University in Brno, Faculty of Science	solid state physics
prof. Ing. Vladimír Smejkal, CSc.	forensic engineer, Prague	business and management
prof. Ing. Jana Stávková, CSc.	dean, Faculty of Business and Economics, Mendel University of Agriculture and Forestry in Brno	statistics
prof. Ing. Petr Stehlík, CSc.	BUT FME	process engineering
prof. Ing. arch. Jilji Šindlar, CSc.	BUT FA	architecture
prof. Ing. arch. Vladimír Šlapeta, DrSc.	dean, BUT FA	architecture
prof. RNDr. Ing. Petr Štěpánek, CSc.	dean, BUT FCE	concrete structures
prof. Ing. Petr Vavřín, DrSc.	BUT FEEC	cybernetics, automation, and measurement
prof. Ing. Radimír Vrba, CSc.	dean, BUT FEEC	electrical and electronic technology
prof. RNDr. Ing. Jan Vrbka, DrSc.	BUT FME	mechanics of solids

BUT Managerial Board

Jiří Bělohlav
Valentin Girstl
Ing. Miroslav Hošek
Ing. Vladimír Jeřábek, MBA, Chairperson
Ing. Stanislav Juránek
Ing. Petr Karas, CSc.
PhDr. Martin Profant
Ing. Helena Šebková, CSc.
Ing. Jiří Škrla, Vice-Chairperson
Ing. Michal Štefl
doc. Ing. Jiří Volf, CSc.

BUT Academic Senate

doc. RNDr. Josef Dalík, CSc. – Chairperson
doc. Dr. Ing. Petr Hanáček – Vice-Chairperson and Chairperson of Chamber of Academics
Bc. Veronika Donthová – Vice-Chairperson and Chairperson of Chamber of Students

Chamber of Academics

doc. RNDr. Josef Dalík, CSc. (FCE)
doc. Ing. Eva Gescheidtová, CSc. (FEEC)
doc. Dr. Ing. Petr Hanáček (FIT)
Ing. Helena Hanušová, CSc. (FBM)
Ing. arch. Jan Hrubý, CSc. (FA, until 30th April 2006)
Ing. Jana Korytárová, Ph.D. (FCE)
RNDr. Vlasta Krupková, CSc. (FEEC)
doc. Ing. Jiří Kunovský, CSc. (FIT)
doc. MgA. Petr Kvíčala (FFA)
doc. Ing. Zdeňka Lhotáková, CSc. (FA)
Ing. arch. Ladislav Mohelník, Ph.D. (FA, from 30th May 2006)
doc. Ing. Miloslav Pekař, CSc. (FC)
RNDr. Pavel Popela, Ph.D. (FME)
Ing. Jan Roupec, Ph.D. (FME)
PhDr. Jana Spoustová (FFA)
Ing. Stanislav Škapa, Ph.D. (FBM)
prof. RNDr. Milada Vávrová, CSc. (FC)

Chamber of Students

Ing. Daniela Čechová (FME)
Petr Donth (FCE)
Bc. Veronika Donthová (FBM)
Petr Dub, DiS. (FFA)
Ing. arch. Martin Kareš (FA, from 2nd May 2006)
Ing. arch. Petr Kocián (FA, until 4th April 2006)
Bc. Jakub Mahdal (FIT)
Jan Myšulka (FC)
Ing. Petr Polách (FEEC, from 21st November 2006)
Tomáš Žabka (FEEC, until 27th June 2006)

BUT AS Working Committees:
Legislation Committee:

Petr Donth
Bc. Veronika Donthová
Petr Dub, DiS.

doc. Ing. Eva Gescheidtová, CSc.
doc. Ing. Zdeňka Lhotáková, CSc. - chairperson
Jan Myšulka
doc. Ing. Miloslav Pekař, CSc.
Ing. Jan Roupec, Ph.D.
prof. RNDr. Milada Vávrová, CSc.
Ing. arch. Martin Kareš (from 2nd 5. 2006)

Economic Committee:

Veronika Donthová
doc. Dr. Ing. Petr Hanáček
Ing. Helena Hanušová, CSc.
Ing. arch. Jan Hrubý, CSc. (until 30th April 2006)
Ing. Jana Korytárová, Ph.D.
RNDr. Vlasta Krupková, CSc.
doc. MgA. Petr Kvíčala
Bc. Jakub Mahdal
Ing. arch. Ladislav Mohelník, Ph.D. (from 30th May 2006)
RNDr. Pavel Popela, Ph.D. - chairperson
prof. RNDr. Milada Vávrová, CSc.

Pedagogic Committee:

Ing. Daniela Čechová
Ing. Helena Hanušová, CSc.
RNDr. Vlasta Krupková, CSc. - chairperson
doc. Ing. Jiří Kunovský, CSc.
PhDr. Jana Spoustová
Ing. Stanislav Škapa, Ph.D.

1. 4. BUT Representatives in Czech University Associations, International Organizations, and Professional Organizations

see Table 1. 4. in Appendix 1.

1. 5. Women in BUT Academic Bodies

Faculties	Deans' Advisory Board	Academic Senate	Scientific Board
	number of women/number of members	number of women/ number of members	number of women/ number of members
FA	2/14	1/13	2/14
FCE	0	16/50	3/45
FEEC	3/12	7/19	2/29
FC	4/1	5/13	7/35
FIT	0	0	0
FBM	4/15	11/21	2/25
FME	4/12	10/36	0
FFA	1/5	6/11	2/23
	Rector's Advisory Board	**Academic Senate ***	**Scientific Board**
BUT	3/25	9/24	0

** Note: The academic senates of BUT and faculties delegated 12 representatives to the Council of Universities including 5 women.*

2. QUALITY AND EXCELLENCY OF ACADEMIC ACTIVITIES

2. 1. BUT Management and Integration

• Management

Leading BUT officials have evaluated the processes to be managed by individual members of BUT Top Management. The cancelled chancellor position has necessitated clear definitions of the sphere of activity of each vice-rector.

A restructuring of the Rectorate has been designed, discussed, and approved by the appropriate bodies.

To improve their qualification, the BUT leading officials have been trained systematically on the following selected subjects:

– Strategy of academic and administrative staff education; notions and notion structures in university texts; situation and development of the Bologna process in the Czech Republic; financing of universities in the Czech Republic and in the EU (projects); the present situation with and the outlook of the research and development programmes offered by the Ministry of Education, Youth, and Sports (MEYS); instructions on the legal regulations concerning universities and the problems currently encountered; financing and the long-term plans of the MEYS and BUT for the 2006-2010 period.

– MEYS development programme and BUT 2007 projects, company spin-off, the 2007-2013 planning period, the De Minimis issues, 2007–2013 structural funds

Integrated risk management has been introduced by establishing a BUT Risk Management Committee with risk managers subsequently appointed and risk analysis and map worked out.

• Integration

A number of internal regulations have been redrafted to improve BUT integration and management: BUT Constitution, The Election and Procedural Rules of the BUT Academic Senate, The Election and Procedural Rules of the BUT Scientific Board, BUT Payroll Rules, BUT Study and Examination Rules, BUT Scholarship Rules, BUT Disciplinary Rules, and BUT Management and Accounting Rules.

The faculties of civil engineering and architecture have signed an agreement concerning architecture teaching.

2. 2. The Academic Senate

In 2006, the BUT Academic Senate (BUT AS) convened at regular sessions and at one special session held in May 2006. The economic, legislative, and pedagogic committees met during the regular BUT AS sessions. Several independent sessions of the Student Chamber of the BUT AS were also held.

In 2006, the new wordings of some internal regulations prepared by the BUT AS Legislative Committee (LC) were sent for registration to the MEYS, which is very important.

At 16 sessions and during short meetings before the BUT AS sessions, the BUT AS Legislative Committee dealt with a number of documents and legal acts to be approved or commented on by the BUT AS (concerning the BUT Scientific Board, new team of vice-rectors, amendment to the Rectorate's organizational chart, annual report, suggestions by faculties and BUT units, etc.). Most of the time, the committee was concerned with amendments to the internal regulations of BUT, its faculties and units in connection with the amended universities act. Also at its meetings, the Legislative Committee discussed changes in, modifications to and comments by other AS members on the proposals submitted.

Together with other BUT AS committees and members, the LC evaluated and discussed amendments to internal regulations. A number of such amended internal regulations have already been approved by the BUT AS and registered by the MEYS by virtue of Section 36, Paragraph 2 of Act no. 111/1998 Coll. These include:

- BUT Scientific Board Procedural Rules
- BUT Payroll Rules
- BUT Constitution
- BUT AS Election and Procedural Rules
- BUT Study and Examination Rules
- BUT Scholarship Rules
- BUT Student Disciplinary Rules
- BUT Management and Accounting Rules

All the preparative activities were organized to take place at a special session of the BUT AS at Všemin (18th to 20th May 2006) where these key documents were discussed, updated, and prepared for approval by the May and June sessions of the BUT AS. With the BUT Constitution and internal regulations being registered by the MEYS in the Summer of 2006, the entire process of preparation and approval of the documents may be seen as a valuable success in the cooperation between the new BUT management and the BUT AS. The BUT AS Legislative Committee was then concerned with implementing the regulations in the faculty environments.

The valuable outcomes of the amendments include the provision of rights to students - AS members concerning transfers between different forms of study, improved rights of the academic community of BUT as a whole in addition to those at particular faculty communities, evaluation of work done at the Rectorate resulting in an analysis of the processes going on at the Rectorate during the summer of 2006 preparing its restructuring in the autumn.

Based on the common experience of the new BUT management and BUT AS members and, after evaluating the comments and suggestions from the faculties recorded over years, a decision was made to prepare a restructuring project of the Rectorate and BUT units for 2007 to meet the demand approved by a majority of the BUT academic community of a higher quality of the services provided by the office for BUT as a whole.

In the summer of 2006, guided and fully supported by the vice-rectors, a number of BUT AS members helped analyse the processes going on at the Rectorate .

In the autumn that followed, the solution proposals made by the BUT leading officials were presented at the BUT AS sessions. The proposals were also discussed in more detail and commented on at one-day working sessions of the BUT AS at Rozdrojovice.

In cooperation with other committees, the LC also discussed and updated the BUT Mission Statement concerning its teaching, scientific, research, development, artistic, and creative activities, the establishment of new firms with BUT participation, budget-related matters and other documents submitted recommending them for approval by the BUT AS.

The activities of the Pedagogic Committee (PC) in 2006 mostly centred around the procurement of the underlying documents necessary for teaching-related proposals: the methods were examined of assessing the performance of students at BUT faculties, at Czech and renowned European universities to provide a basis for amending the BUT Study and Examination Rules; in connection with the updated BUT Mission Statement, information was collected on the volume and methods of inter-faculty teaching and, last but not least, work continued on the preparation of a methodology for assessing the workload of teachers at BUT faculties.

In the year 2006, which was the first year of cooperation between the BUT AS and the new BUT management, the BUT AS Economic Committee (EC) continued its previous activities and, through a concerted effort of all its ten members (see the list) and the BUT AS chairperson, prepared the underlying documents and viewpoints for the BUT AS sessions. This effort received massive support from the BUT AS secretary thanks to his permanently active approach. At its 21 meetings, the Committee passed 49 resolutions, of which a majority have been fulfilled. The permanent resolutions have already been formulated and are expected to remain in force more than a year.

All the EC members were actively involved in the work of the rector's advisory boards (Editorial Board, Halls of Residence and Canteens Supervisory Board, Building Committee, CEITEC Council, Risk Management Committee) to efficiently transfer suggestions from the BUT academic community. The EC meetings were regularly attended by BUT bursar Ing. Kotek.

The traditional and key point on the agenda of the EC meetings was the preparation and approval of the BUT 2007 budget. Success was also marked in specifying and rectifying the financial flows submitted by the previous BUT management. The rules as approved then better suited the strategic plans of the new BUT management (see below).

The swapping of non-investment for investment funding brought about by the scope of the new construction needed at BUT and by the amendments to the Czech legal regulations was identified as the gravest problem of the BUT budget limiting the development of its human resources. With several years' lag, the overshot reconstructions and visions of the 1990's, insufficiently backed by financial impact analyses, took their toll. In cooperation with the new BUT management, the BUT AS initiated strategic measures designed to manage such problems difficult to deal with due to their enormous inertia.

With regard to the problems and suggestions of previous years, compliance was reached with the BUT profit and loss statement. In particular cases, a so-called Hevlin-Table method was used and discussed with the partner West Bohemia University comparing their approaches. Once approved by the BUT bursar, a stricter control was initiated of construction costs with some economy achieved. An analysis of economic data triggered work on performance analysis mostly concerning research. The 2005 Annual BUT Management Report was discussed in some detail with the critical findings incorporated in the BUT 2007 Budget Rules.

The BUT AS and its Economic Committee, in cooperation with BUT bursar, initiated a system of stricter audits of the budgets and management of BUT units.

2. 3. Access to Education, Permeability, Lifelong Education

A total of 60 degree programmes were accredited at BUT in 2006. The degree programmes cover a wide spectrum of classical fields of engineering and science, as well as interdisciplinary fields combining engineering and science or business. Also architectural and artistic degree programmes are accredited. Table 2a lists active programmes by groups while Table 2a_1 shows all the degree programmes by faculties.

Table 2a Accredited Degree Programmes

Programme Groups	Degree Programmes						
	Bac.		Mag.		Follow-up Mag.		Doct.
	P	K	P	K	P	K	
Natural Sciences	0	0	0	0	0	0	2
Engineering	14	5	9	4	12	7	15
Economics	2	2	0	0	2	1	1
Artistic and Cultural Sciences	1	0	0	0	1	0	1
Total	**17**	**7**	**9**	**4**	**15**	**8**	**19**

Table 2a_1 Accredited Degree Programmes by Faculties

Faculty	Bc. Progr.	Mgr. Progr.	Follow-Up Mgr. Progr.	Ph.D. Progr.	Total Progr.
FCE	5	2	0	3	10
FME	2	1	3	7	13
FEEC	2	1	2	1	6
FIT	1	1	2	1	5
FC	3	4	4	4	15
FA	1	0	1	1	3
FFA	1	0	1	1	3
FBM	2	0	2	1	5
Total	**17**	**9**	**15**	**19**	**60**

Table 2b Numbers of Lifelong-Learning Courses

Programme groups	Profession-oriented courses			Special-interest courses			U3A	Total
	up to 15 lessons	up to 100 lessons	more	up to 15 lessons	up to 100 lessons	more		
Natural Sciences							1	1
Engineering			2				31	33

Agriculture, Forestry, and Veterinary								
Health Care, Medicine, Pharmacy							4	4
Social Sciences and Services			1					1
Economics	1						2	2
Law, Public Administration	1	9						10
Pedagogy, Teaching, Social Care	4		1					5
Psychology Fields	2							2
Artistic and Cultural Sciences								
Total	**8**	**9**	**4**				**39**	**60**

Table 2b Numbers of Lifelong-Learning Students

Programme groups	**Profession-oriented courses**			**Special-interest courses**			**U3A**	**Total**
	up to 15 lessons	**up to 100 lessons**	**more**	**up to 15 lessons**	**up to 100 lessons**	**more**		
Natural Sciences							17	17
Engineering			10				603	613
Agriculture, Forestry, and Veterinary								
Health Care, Medicine, Pharmacy							105	105
Social Sciences and Services			17					17
Economics	15						8	23
Law, Public Administration	21	63						84
Pedagogy, Teaching, Social Care	31		20					51
Psychology Fields	33							33
Artistic and Cultural Sciences								
Total	**100**	**63**	**47**				**998**	**1208**

2. 4. Interest in BUT Studies

Long term statistics show that the interest in BUT study is constantly growing. The number of applications submitted exceeded 17,000 in 2006. Gratifying is that the percentage of the students actually enrolled out of the total of those admitted is growing, too. This means that, of all the applications submitted to different universities, the candidates are likely to choose the one submitted to our university. Table 3 indicates the interest of candidates in individual degree programmes.

Table 3 Interest of the Candidates in BUT Studies

Programme Groups	Number of				
	applications submitted	applications registered	candidates eligible	candidates admitted	candidates enrolled
Total	**17155**	**14186**	**11652**	**9665**	**8068**
Natural Sciences	14	14	14	14	14
Engineering	12467	10214	8924	8169	6835
Economics	4189	3490	2623	1391	1132
Artistic and Cultural Sciences	485	468	91	91	87

2. 5. Students In Accredited Degree Programmes

Due to the growing interest in BUT studies, the student numbers are steadily increasing. Table 4 shows the student numbers on 31st October 2006 arranged by degree-programme groups and levels of tertiary education. The long Master's programmes include students mostly from the Faculty of Civil Engineering where the restructuring of studies in the sense of the Bologna process had already been accomplished two years ago. No more students are admitted to the long, non-follow-up Master's programmes with their numbers dropping rapidly and the proportion of students enrolled to follow-up Master's programmes growing. Table 4_1 lists total student numbers including suspended studies while, in Table 4_2, these are grouped by programme types, in Table 4_3 by faculties, and in Table 4_4 by degree programmes. Table 4_5 lists international student numbers.

Table 4 Student Numbers in Accredited Programmes on 31st October 2006

Programme groups	Students in the programme								Total
	Bac.		Mag.		Follow-up Mag.		Doct.		
	P	K	P	K	P	K	P	K	
Natural Sciences	0	0	0	0	0	0	39	27	66

Engineering	10499	1004	2812	186	1872	177	836	939	18325
Economics	1225	64	0	0	645	381	50	62	2427
Artistic and Cultural Sciences	182	0	0	0	83	0	4	0	269
Total	**11 906**	**1 068**	**2 812**	**186**	**2 600**	**558**	**929**	**1 028**	**21 087**

Table 4_1 Student Numbers Including Suspended Studies Arranged by Programmes

Programme groups	Master field code	Students in the Programme				Total
		Bc.	Follow-up Mag.	Mgr.	Ph.D.	
Natural Sciences	14	0	0	0	73	73
Engineering	23 to 39	11 627	2 090	3 080	1 827	18 624
Economics	62	1 307	1 067	0	116	2 490
Artistic and Cultural Sciences	82	187	106	0	4	297
BUT Total		**13 121**	**3 263**	**3 080**	**2 020**	**21 484**

Table 4_1 Student Numbers Including Suspended Studies Arranged by Programme Types

Programme type		Study form		Total
		full-time	combined	
Bc.	Bachelor's	12 025	1 096	13 121
Ing. /Mgr.	Follow-Up Master's	2 676	587	3 263
Ing. /Mgr.	Master's	2 889	191	3 080
Ph.D.	Doctoral	970	1 050	2 020
Total		**18 560**	**2 924**	**21 484**

Table 4_3 Student Numbers Including Suspended Studies Arranged by Faculty and Programme Type

Faculty	Programme type				Total
	Bachelor's	Follow-up Master's	Master's	Doctoral	
FCE	3585	0	1696	563	5844

FME	2617	503	907	609	4636
FEEC	2837	915	132	363	4247
FIT	1525	462	94	117	2198
FC	654	52	251	153	1110
FA	409	158	0	95	662
FFA	187	106	0	4	297
FBM	1307	1067	0	116	2490
Total	**13121**	**3263**	**3080**	**2020**	**21484**

Tab. 4_4 Student Numbers Including Suspended Studies by Faculty and Programme

Fak	Programme code and name		Male students	Female students	Study form		Total
					full-time	comb.	
FCE	B3503	Architecture of Building Structures	48	49	97	0	97
	B3607	Civil Engineering	2222	796	2683	335	3018
	B3609	Building	190	62	252	0	252
	B3646	Geodesy and Cartography	122	96	218	0	218
	M3607	Civil Engineering	1186	390	1400	176	1576
	M3646	Geodesy and Cartography	71	49	120	0	120
	P3607	Civil Engineering	350	139	213	276	489
	P3646	Geodesy and Cartography	10	5	10	5	15
	P3917	Forensic Engineering	35	24	15	44	59
FME	B2341	Mechanical Engineering	2227	142	2046	323	2369
	B3901	Applied Sciences in Engineering	198	50	248	0	248
	M2301	Mechanical Engineering	832	75	907	0	907
	N2301	Mechanical Engineering	401	38	271	168	439
	N3901	Applied Sciences in Engineering	56	8	64	0	64
	P2302	Machinery and Equipment	231	15	107	139	246
	P2303	Manufacturing Technology	58	17	23	52	75
	P3901	Applied Sciences in Engineering	84	6	47	43	90
	P3910	Physical and Material Engineering	87	11	47	51	98
	P3913	Applied Natural Sciences	30	8	15	23	38

	P3917	Forensic Engineering	19	1	5	15	20
	P3920	Metrology and Testing	27	15	17	25	42
FEEC	B2612	Electrical Engineering and Informatics	1	0	1	0	1
	B2643	Electrical Engineering, Electronics, Communication and Control Technology	2771	65	2526	310	2836
	M2612	Electrical Engineering and Informatics	128	4	132	0	132
	N2612	Electrical Engineering and Informatics	4	0	4	0	4
	N2643	Electrical Engineering, Electronics, Communication and Control Technology	888	23	911	0	911
	P2643	Electrical Engineering, Electronics, Communication and Control Technology	351	12	204	159	363
FIT	B2646	Information Technology	1475	50	1525	0	1525
	M2612	Electrical Engineering and Informatics	89	5	94	0	94
	N2612	Electrical Engineering and Informatics	1	0	1	0	1
	N2646	Information Technology	448	13	461	0	461
	P2646	Information Technology	110	7	73	44	117
FC	B2801	Chemistry and Chemical Technology	148	280	383	45	428
	B2825	Public Protection	36	14	50	0	50
	B2901	Chemistry and Food Technology	24	152	157	19	176
	M2805	Environmental Chemistry and Technology	27	43	64	6	70
	M2806	Consumer Chemistry	10	34	44	0	44
	M2808	Chemistry and Technology of Materials	35	14	47	2	49
	M2901	Chemistry and Food Technology	18	70	81	7	88
	N2805	Environmental Chemistry and Technology	2	7	5	4	9
	N2806	Consumer Chemistry	2	2	4	0	4
	N2820	Chemistry, Technology and Properties of Materials	4	8	10	2	12
	N2901	Chemistry and Food Technology	0	27	16	11	27
	P1404	Physical Chemistry	14	31	30	15	45
	P1405	Macromolecular Chemistry	17	11	15	13	28

	P2805	Environmental Chemistry and Technology	15	32	26	21	47
	P2820	Chemistry, Technology and Properties of Materials	16	10	17	9	26
	P3911	Materials Sciences	5	2	0	7	7
FA	B3501	Architecture and Town-Planning	205	204	409	0	409
	N3501	Architecture and Town-Planning	90	68	158	0	158
	P3501	Architecture and Town-Planning	52	43	52	43	95
FFA	B8206	Fine Arts	79	108	187	0	187
	N8206	Fine Arts	50	56	106	0	106
	P8206	Fine Arts	0	4	4	0	4
FBM	B6208	Economics and Management	304	407	655	56	711
	B6209	Systems Engineering and Informatics	472	124	588	8	596
	N6208	Economics and Management	600	467	665	402	1067
	P6208	Economics and Management	81	35	50	66	116
BUT Total			**17 056**	**4 428**	**18 560**	**2 924**	**21 484**

Tab 4_5 International Student Numbers

Programme Type		**International Students**
Bc.	Bachelor's	1 124
Ing. /Mgr.	Follow-Up Master's	231
Ing. /Mgr.	Master's	86
Ph.D.	Doctoral	101
Total		**1 542**

2. 6. BUT Graduates

The BUT graduate numbers are growing each year. With the last long Master's degree programme students finishing gradually their studies, the number of students graduating from Bachelor's and Follow-Up Master's programmes is increasing. The numbers arranged by programmes and degrees of tertiary education are shown in Table 5; Table 5_1 lists 2006 graduates by faculty and programme. Table 5_2 lists the doctoral graduates with their theses and supervisors shown in Appendix 2. Table 5_3 shows 2006 graduates with awards.

Table 5 Graduates from Accredited Degree Programmes from 1st January 2006 to 31st December 2006.

Programme groups	Graduates in the programme								Total graduates
	Bac.		Mag.		Follow-up Mag.		Doct.		
	P	K	P	K	P	K	P	K	
Natural Sciences	0	0	0	0	0	0	3	8	11
Engineering	1 154	57	1 631	31	223	32	27	109	3 264
Economics	195	0	0	0	249	121	0	8	573
Artistic and Cultural Sciences	40	0	0	0	35	0	0	0	75
Total	**1 389**	**57**	**1 631**	**31**	**507**	**153**	**30**	**125**	**3 923**

Table 5 Graduates from Accredited Degree Programmes from 1st January 2006 to 31st December 2006 by Faculty and Programme.

Faculty	Programme	Male Graduates	Female Graduates	Internat. Graduates	Total
FCE	M3607	387	123	18	510
	M3646	24	22	0	46
	P3607	15	7	0	22
	P3646	1	2	0	3
FCE Total		**427**	**154**	**18**	**581**
FME	B2341	210	15	3	225
	B3901	9	0	1	9
	M2301	373	39	15	412
	N2301	95	10	2	105
	N3901	35	4	3	39
	P2302	23	0	2	23
	P2303	2	3	0	5
	P3901	2	0	1	2
	P3910	12	2	0	14
	P3913	1	1	1	2
	P3917	1	0	0	1

	P3920	0	1	0	1
FME Total		**763**	**75**	**28**	**838**
FEEC	B2612	33	0	4	33
	B2643	546	12	8	558
	M2612	397	15	38	412
	N2612	7	0	0	7
	N2643	15	3	3	18
	P2643	44	1	3	45
FEEC Total		**1042**	**31**	**56**	**1073**
FA	B3501	40	25	1	65
	N3501	41	28	3	69
	P3501	4	1	1	5
FA Total		**85**	**54**	**5**	**139**
FC	B2801	3	6	0	9
		2	9	0	11
	M2805	7	13	0	20
	M2806	8	13	1	21
	M2808	9	18	1	27
	M2901	2	31	2	33
	N2805	0	1	1	1
	N2820	1	0	0	1
	N2901	0	5	0	5
	P1404	5	4	0	9
	P1405	2	0	0	2
	P2805	1	0	0	1
	P2820	0	2	0	2
	P3911	1	0	0	1
FC Total		**41**	**102**	**5**	**143**
FBM	B6208	60	117	2	177
	B6209	17	1	3	18
	N6208	170	200	13	370

	P6208	5	3	1	8
FBM Total		**252**	**321**	**19**	**573**
FFA	B8206	15	25	1	40
	N8206	14	21	6	35
FFA Total		**29**	**46**	**7**	**75**
FIT	B2612	6	0	0	6
	B2646	285	10	23	295
	M2612	175	6	11	181
	N2612	4	0	0	4
	N2646	6	0	6	6
	P2646	9	0	0	9
FIT Total		**485**	**16**	**40**	**501**
BUT Total		**3 124**	**799**	**178**	**3 923**

Table 5_3 Graduates with Awards

Best Graduate Rector Award		
	FCE	Martin Kuruc
	FME	Pavel Pokorný
	FEEC	Petr Zelinka
	FC	Božena Čechalová
	FIT	Zdeněk Fidler
	FFA	Jan Klimeš
Josef Hlávka Award		
	FCE	Jan Eliáš
	FME	Pavel Pokorný
	FIT	Zdeněk Vašíček
	FFA	Vendula Chalánková
Siemens 2006 Award		
	FEEC	Kateřina Klosová
		Ilona Lázničková
		Jiří Schimmel

PRECIOSA Foundation Award		
	FEEC	Lucie Dordová
		Marek Bobula
	FME	Lucie Šestáková
		Jiří Toul
	FC	Lucie Kudělková

Jobs for Graduates

An enquiry made in May 2006 of jobs offered to the BUT 2003-2005 graduates substantiates, among others, the following conclusions:

Two thirds of the employed respondents (BUT graduates) take up a position corresponding to their university qualification in the field of their study.

However, there are significant differences between BUT faculties. Their university qualification is best utilised by the graduates from the Faculty of Architecture. The percentage of those FA graduates that take up a university position in their employment is 93.8 while with the FIT graduates, this figure reaches 90.2 and with those from FFA 88.5; the percentages of other BUT faculties, that is, FEEC, FC, FBM, FCE, FME are markedly lower – see Table 5_4.

Table 5_4 Education Required at Current Employment Positions by Faculty

Current Job Position Education Required (%)	FA	FEEC	FC	FIT	FBM	FCE	FME	FFA	BUT Total
University education within industry	93.8	67.0	70.6	90.2	56.2	67.8	55.2	88.5	66.1
University education outside industry	0	15.9	13.7	0.9	16.8	8.5	23.1	7.7	14.0
Secondary-school education within industry	6.2	14.8	8.8	8.0	16.4	20.5	19.5	3.8	15.8
Secondary-school education outside industry	0	1.7	5.9	0.9	9.8	2.6	1.6	0	3.5
Lower than secondary-school education	0	0.6	1.0	0	0.8	0.6	0.6	0	0.6
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

The time spent by BUT graduates on getting their first job is very short for most of them. There is a remarkably high number of those graduates that have been offered a job even before their studies are finished. They form almost one half of those with job-getting experience. Within 6 months after graduation, almost all of the graduates have a job. BUT graduates mostly find their jobs in private businesses and in the internal labour markets of big companies.

- Ten percent of BUT graduates work in research and development.
- A significant percentage (37) of BUT graduates work as managers.
- A high percentage of BUT graduates (87) are satisfied with their current jobs.

BUT Cooperating with Its Graduates

BUT graduate cooperation is not centrally managed. At all the faculties, the graduates are involved in teaching, provide themes for Master's and Bachelor's degree projects and Ph.D. theses. They also help organize on-the-job training and sponsor conferences and student competitions. They regularly cooperate with faculties on research projects. At some faculties, such as the Faculty of Mechanical Engineering, they helped innovate degree programmes. At the Faculty of Business and Management, an alumni association exists with 258 members registered on 31st December 2006. At the Faculty of Civil Engineering, preparations started for establishing an FCE alumni association. At the Faculty of Chemistry, an alumni information system is under construction. At all the faculties, the graduates are invited to regular events to commemorate the university anniversaries where they can learn about the current situation at the faculty and its development.

2. 7. Dropouts

A relatively high number of dropouts, particularly during the first years of Bachelor's degree programmes, is a common problem of technical universities. Even in this regard, a gradual improvement can be observed - mostly due to the transition to a structured study system. Table 6 lists students that dropped out in 2006.

Table 6 Dropout Numbers in Accredited Degree Programmes from 1st January 2006 to 31st December 2006

Programme group	Dropouts in the programme								Total
	Bac.		Mag.		Follow-up Mag.		Doct.		
	P	K	P	K	P	K	P	K	
Natural Sciences	0	0	0	0	0	0	0	4	4
Engineering	1 052	376	144	42	41	46	53	115	1 869
Economics	72	0	0	0	36	28	1	9	146
Artistic and Cultural Sciences	2	0	0	0	8	0	0	0	10
Total	**1 126**	**376**	**144**	**42**	**85**	**74**	**54**	**128**	**2 029**

2. 8. Credit System, Diploma Supplements

BUT makes a full use of the European Credit Transfer and Accumulation System (ECTS) and all its instruments in all the Bachelor's and Master's degree programmes. A module of the information system recommended by the EU has been installed. In 2007, an application will be filed for ECTS Label certification.

Along with a Bachelor's or a Master's degree, each graduate also receives a free English-Czech degree supplement in the form and with the content as recommended. In 2006 Brno University of Technology obtained a Diploma Supplement Label certificate.

2. 9. BUT Cooperation with the Region

In 2006, the Technology Transfer Department concentrated its activities on four basic areas:

– mediating and helping initiate cooperation with industrial partners to meet the requirements of industries including joint participation in grant projects (consulting, measurement, analyses, providing solutions to research and development projects, joint grant projects supported mainly by the Ministry of Industry and Commerce and European Commission, long-term cooperation and strategic partnership, etc.),

– providing consulting services on the 6th and 7th EC Framework Programme for institutions in the region (the South Moravian Regional Contact Organization headquarters) such as the basic consulting on the use of the Czech and European subsidy titles,

– BUT intellectual property rights (consulting services on the taking out of patents for inventions, creation of utility and industrial models, research outcome use agreements, drawing up contracts, patents, etc.),

– basic lectures and advanced educational modules on technology transfer for BUT staff and those interested from industries and other institutions. Due attention was paid to the preparation of BUT's own three new grant projects including a EUPRO project designed to support the activity of the Regional Contact Organisation in the next four years.

The cooperation of individual BUT faculties with industrial partners took the form of working on joint projects within the programmes of the Ministry of Industry and Trade of the Czech Republic, orders by industrial entities, joint-projects based on contractual cooperation receiving no subsidy from the government, expert and financial support for teaching by industrial entities, expert and financial support for student competitions. The faculties organized training courses for the staff of companies in the region and provided expert and consulting services. Cooperation with companies and public administration institutions as well as cultural institutions was considerable, too.

2. 10. Qualification and Age Structure of Academic Staff

Table 7a Age Structure of BUT Staff

Age	Academic staff										Research staff	
	professors		senior lecturers		senior assistants		assistants		instructors			
	total	women	total	women	total	women	total	women	total	women	total	women
up to 29 years	-	-	-	-	35	7	70	20			3	0
30 – 39 years	1	-	21	1	166	23	79	29	1	1	15	4
40 -49 years	9	-50	7	95	40	24	13				3	0
50 -59 years	42	3	92	10	135	63	4	1			2	0
60 -69 years	62	4	102	10	80	24	3	2			7	1
70 years and more	26	-	24	2	4		1				4	0
Total	**140**	**7**	**289**	**30**	**515**	**157**	**181**	**65**	**1**	**1**	**34**	**5**

Table 7b Academic Staff Numbers on 31st December 2006.

Total staff	Total	Professors	Senior lecturers	Others	DrSc.	CSc.	Dr., Ph.D., Th.D.
Academic staff workload	1139	140	289	710	38	407	353
up to 30 %	36	5	10	21	2	19	4
up to 50 %	51	5	10	36	-17	9	
up to 70 %	39	9	9	21	3	16	11
up to 100 %	1013	121	260	632	33	355	329

2. 11. Advances of Research, Development, Artistic, and Other Activities at BUT

In 2006, the research and creative activities of the BUT academic staff made further advances with the proportion of doctoral students involved steadily growing. Creative activities at BUT are carried out in many areas of engineering, natural and technical sciences, and arts. This diversity

provides a fertile ground for new interdisciplinary activities. Last year, as in the preceding period, the research and creative activities of the BUT academic staff received funding from four main sources. The first source was institutional research funding for universities receiving subsidies mostly from the Science and Research Support programme of the Ministry of Education, Youth, and Sports of the Czech Republic. In 2006, there were 8 research plans, 9 research centres and 3 basic research centres at BUT (see Table 2.10.1). BUT was the owner of two centres and participated in the programmes of another two centres.

Table 2.10.1 1M Research Centres

Fac.	Centre Name	Solution Provider	Owner
FME	Centre of Aviation and Space Research	Píštěk Antonín, prof. Ing. CSc.	BUT
		Solution Co-Provider	
FCE	Centre of Integrated Design of Progressive Building Structures	Melcher Jindřich, prof. Ing. CSc.	Czech Technical University in Prague
FCE	Centre of Integrated Research of Inorganic Composites	Štěpánek Petr, prof. RNDr. Ing. CSc.	Research Institute of Building Materials
FME	Josef Božek Research Centre of Combustion Engines and Automobiles II	Píštěk Václav, doc. Ing. CSc.	Czech Technical University in Prague
FME	Ecological Centre of Applied Research of Non-Ferrous Metals	Ptáček Luděk, doc. Ing. CSc.	VUK Panenské Břežany, s. r. o.
FME	Research Centre of Manufacturing Technology	Kolíbal Zdeněk, prof. Ing. CSc	Czech Technical University in Prague
FME	Centre for Production Quality and Reliability	Karpíšek Zdeněk, doc. RNDr. CSc.	Czech Technical University in Prague
FEEC	Data, Algorithms, Decision-Making	Jan Jiří, prof. Ing. CSc.	Czech Academy of Sciences, Institute of Information Theory and Automation
FEEC	Centre of Applied Cybernetics	Vavřín Petr, prof. Ing. CSc.	Czech Technical University in Prague

LC Programme Centres of Basic Research

Fac.	Centre Name	Solution Provider	Owner/Coordinator
FME	Structures for Nanophotonics and Nanoelectronics	Šikola Tomáš, prof. RNDr. CSc.	BUT
FEEC	Centre for Quasioptical Systems and Tetrahertz Spectroscopy	Raida Zbyněk, prof. Ing. CSc.	Institute of Chemical Technology, Prague
FIT	Centre of Computer Graphics	Zemčík Pavel, doc. Dr.	Czech Technical University in Prague

A major part of the institutional funding is formed by specific research at universities as provided by the Act no. 130/2002 Coll. The second source was targeted research funding covering projects submitted within grant systems such as GA ČR and the grant agencies of the Czech Academy of Sciences and ministries, particularly the Ministry of Industry and Trade. Here, BUT has long been among the most successful universities with the proportion of its successfully submitted applications exceeding the national average. The third source of research funding was the participation in international projects supported by grants such as COST, EUREKA, INGO, CONTACT, 5th FP, and 6th FP. In view of research internationalization, the participation in international projects is of key importance. Finally, applied research funded through contracts with domestic and foreign industrial enterprises also forms a major part of research activities.

In 2006, 250 million CZK from institutional sources could be used to finance research. The total funding received from all the four sources in support of all the research and creative activities at BUT exceeded 549 million CZK, which is about 27 % of the university budget. This means a 31 percent increase on 2005. As every dynamic institution, despite the growing tendency achieved, BUT should seek comparison with rival universities such as Czech Technical University in Prague and Masaryk University in Brno. In this regard, our increase rate is about the same as that of Czech Technical University in Prague but we are doing worse than Masaryk University. This is reflected in the lower subsidy on specific research calculated for 2007 as compared with that for 2006 (by 4 %).

Table 8 lists the numbers of grant projects received at BUT and the total volume of funding from grant competitions supported by targeted resources.

Table 8

Name of grant, research project, patent, etc	Source	Thousands of CZK in funding
GA Standard Projects	B	83 125
GP Post-Doctoral Projects	B	9 557
GD Doctoral Projects	B	14 524
Eurocores	B	193
Ministry of Education Research Plans	C	165 867
1K Initial R&D Research Support	C	4 255
1M Research Centres	C	77 921
LC Programme Centres of Basic Research	C	8 403
NPV II National Research Programme II	C	6 954
1E Information Society (National Research Programme TP2)	C	9 944
IA Grants of Distinctive Research Character Targeted at Current Research Done Mostly in the Czech Academy of Sciences	C	1 523
1Q Support for Targeted Research Projects (National Research Programme)	C	2 409
KJ Junior and Research Projects	C	2 456

KA Nanotechnology for Society	C	2 870
FI-IM IMPULS	C	17 719
FT-TA TANDEM	C	31 428
1H-PK PROGRESS (National Research Programme)	C	4 674
TA Sustainable Prosperity	C	50
1F Safe and Economical Transport (National Research Programme)	C	3 172
1G Use of Natural Resources	C	470
1R Landscape of Future – 4 (National Research Programme)	C	480
SN Rational Use of Energy and Sustainable Energy Resources (TP4/DP3)	C	434
WB Research and Development Serving the Needs of the Region	C	370
COST (OC)	C	5 366
EUPRO (OK)	C	2 010
EUREKA (OE)	C	1 829
INGO (LA)	C	725
KONTAKT (ME)	C	1 023
5th and 6th EU Framework Programme (5FP, 6FP)	A	34 462
Marie Curie – as part of a research project	A	354
European Programme of Support for Coal and Steel Research (UIC)	A	2 760
Culture 2000	A	470
AKTION – Research Project	AIPČR	28
11 Bilateral International Cooperation Projects	AIP ČR	274
Rock Boring Tool, particularly designed for bio-minerals; ČR 282216 patent licence	Medin, a. s.	145
Total		**498 244**

BUT Industrial Property Ownership Portfolio (patents in force, etc.) on 31st December 2006

Industrial ownership category protected under special regulations	Subject-matters in force	Patent applications published
Domestic Patent	2	2
Foreign Patent		
US Patent		
EPO Patent		
Japanese Patent		

PCT Application Published		1
Domestic Utility Model	2	
Foreign Utility Model		
Domestic Industrial Model	1	
OHIM Registered Industrial Model		
Domestic Trade Marks	17	
OHIM Trade Marks		

Compared with 2005, the number of national grants and research centres is up from 267 to 343, which is a 28 percent increase, while the total funding volume has risen by 33 percent from 221 million CZK to 294 million CZK. Also the funding of international projects has risen from 35.9 million CZK to 38.6 million CZK, that is, by about 8 percent. It should, however, be stressed that there are still great differences between faculties. These result from the actual sizes of faculties as well as from the substantial differences in the structure of funding, in the average grant volumes, and, above all, in the proportion of participation by researchers who are the owners of grant projects. In this regard, the situation is best at the faculties of mechanical engineering and electrical engineering with the most project owners. In contrast to other Czech universities, BUT can boast the largest proportion of funding received for applied research from departmental grant agencies, particularly from the Ministry of Industry and Trade programmes. This testifies to the growing efforts to apply the basic research outcomes in the industrial practice. The highest success rate, as in the previous years, has been reached with the Ministry of Industry and Trade and the Ministry of Transport and Communication. Here, the faculties of mechanical engineering, civil engineering, electrical engineering, and chemistry should be mentioned as achieving the best results.

In 2006, BUT made much more effort to strengthen the cooperation with Masaryk University in Brno, other Brno universities and institutes of the Czech Academy of Sciences in order to prepare joint projects to be financed from the EU Structural Funds (this particularly applies to the „Science and Research for Innovation" projects (VaVpI)). Apart from this activity, some faculties (FME, FEEC, FCE, FIT, FC) submitted their own VaVpI screening project proposals used by the Ministry of Education, Youth, and Sports to determine the absorption capacities of the Czech regions for small and medium VaVpI projects. Being of key importance for the future of research and development at BUT, the VaVpI projects receive due attention by the BUT officials.

Table 2.10.2 Senior Lecturers (doc.) Appointed in 2006

Faculty	Name	Field of Research	Appointment Date
FCE	Dumbrovský Miroslav, Ing. CSc.	Water Management and Water Structures	17. 1. 2006

FCE	Kalousek Miloš, Ing. Ph.D.	Theory and Construction of Buildings	23. 5. 2006
FCE	Korytárová Jana, Ing. Ph.D.	Building Management	11. 7. 2006
FCE	Kořenská Marta, Ing,. CSc.	Physical and Building Materials Engineering	8. 11. 2006
FCE	Plášek Otto, Ing. Ph.D.	Theory and Construction of Buildings	28. 11. 2006
FCE	Salajka Vlastislav, Ing. CSc.	Theory and Construction of Buildings	8. 11. 2006
FCE	Tichá Alena, Ing. Ph.D.	Building Management	2. 3. 2006
FME	Burša Jiří, Ing. Ph.D.	Applied Mechanics	30. 1. 2006
FME/UTB	Lukovics Imrich, doc. Ing. CSc.	Manufacturing Technology	14. 12. 2006
FME	Maca Karel, RNDr. Dr.	Materials Science and Engineering	18. 5. 2006
FME/MU	Pospíšil Zdeněk, RNDr. Dr.	Applied Mathematics	26. 4. 2006
FME	Šťastný Jiří, RNDr. Ing. CSc.	Construction and Process Engineering	30. 1. 2006
FME	Trunec Martin, Ing. Dr.	Materials Science and Engineering	18. 5. 2006
FEEC	Bejček Ludvík, doc. Ing. CSc.	Technical Cybernetics	9. 5. 2006
FEEC	Koktavý Pavel, Ing. Ph.D. CSc.	Electrical and Electronic Technology	9. 5. 2006
FEEC	Prokeš Aleš, Ing. Ph.D.	Electronics and Communication Technology	9. 5. 2006
FEEC	Václavek Pavel, Ing. Ph.D.	Technical Cybernetics	14. 11. 2006
FEEC	Žalud Luděk, Ing. Ph.D.	Technical Cybernetics	14. 11. 2006
FA	Havliš Karel, Ing. arch.	Town-Planning	14. 11. 2006
FA/At. Brno	Havliš Karel, Ing. arch.	Architecture	24. 11. 2006
FA	Kopáčik Gabriel, Ing. arch. Dr.	Town-Planning	24. 1. 2006
FA	Kotásek Jiří, Ing. arch.	Architecture	20. 9. 2006
FA	Odvárka Antonín, Ing. arch. Ph.D.	Architecture	14. 11. 2006
FA	Urbášková Hana, Ing. arch. Ph.D.	Town-Planning	6. 1. 2006
FBM	Dostál Petr, Ing. CSc.	Industry Economics and Management	28. 2. 2006
FBM/Univ. M. Bela SK	Helienek Emil	Industry Economics and Management	10. 10. 2006
FBM	Zinecker Marek, Ing. Ph.D.	Industry Economics and Management	11. 10. 2006
FC	Weiter Martin, Ing. Ph.D.	Physical Chemistry	26. 4. 2006
FIT	Cvrček Daniel, Ing. Ph.D.	Computing Technology and Informatics	19. 6. 2006
FIT	Sekanina Lukáš, Ing. Ph.D.	Computing Technology and Informatics	19. 6. 2006
FIT	Smrž Pavel, RNDr. Ph.D.	Computing Technology and Informatics	19. 6. 2006

Table 2.10.2 Professors Appointed in 2006

Faculty	Name	Field of Research	Appointment Date
FCE	Ficker Tomáš, doc. RNDr. CSc.	Physical and Building Materials Engineering	2. 5. 2006
FCE	Starý Miloš, doc. Ing. CSc.	Water Management and Water Structures	2. 5. 2006
FCE	Švábenský Otakar, doc. Ing. CSc.	Geodesy and Cartography	2. 5. 2006
FCE	Šulc Jan, doc. Ing. CSc.	Water Management and Water Structures	2. 5. 2006
FME	Hartl Martin, doc. Ing. Ph.D.	Construction and Process Engineering	6. 11. 2006
FSI/Acad. of Sciences	Lencová Bohumila, doc. RNDr. CSc.	Applied Physics	2. 5. 2006
FME	Petruška Jindřich, doc. Ing. CSc.	Applied Mechanics	6. 11. 2006
FME	Podrábský Tomáš, doc. Ing. CSc.	Materials Science and Engineering	2. 5. 2006
FME	Šandera Pavel, doc. RNDr. CSc.	Applied Physics	2. 5. 2006
FEEC	Hanus Stanislav, doc. Ing. CSc.	Electronics and Communication Technology	6. 11. 2006
FEEC	Jura Pavel, doc. Ing. CSc.	Technical Cybernetics	2. 5. 2006
FEEC	Kasal Miroslav, doc. Ing. CSc.	Electronics and Communication Technology	2. 5. 2006
FA/indep. arch.	Koleček Ivan, doc. Ing. arch.	Architecture	2. 5. 2006
FA	Stehlík Milan, doc. Ing. arch. CSc.	Architecture	6. 11. 2006

2. 12. BUT Infrastructure (material, technical and information background), Access to Information and Information Infrastructure Development

CENTRAL LIBRARY

A FEEC Library was built on the Pod Palackého vrchem campus in 2004 initially providing services for three institutions moved into that Integrated Building. Its collection was built from those of the Institute of Automation and Measurement, Institute of Biomedical Engineering, and Institute of Theoretic and Experimental Electrical Engineering.

The library supplies information background for faculty students and teachers as well as for a wider public interested in electrical engineering. Gradually, this library had come to coordinate the activities and services provided by other faculty libraries.

BUT introduced new student and staff identification cards using the MIFARE technology. The

identification card scanners in the libraries had to be upgraded to read the cards identifying library operations. This ensured full integration of services provided by the Aleph500 library system into other university systems.

In the summer of 2006, the BUT libraries started to use a new version of Aleph500. This enabled better use of modern information technology among other things. Steps were undertaken later on to initiate cooperation with the National Library and other library institutions (connection to the Unified Information Gate, use of the National Authorities Database …).

Table 9 University Libraries, Library-Information Services

Yearly collection increase	16 482
Total collection	315 098
Number of periodical titles:	
- paper form	1 012
- electronic form (estimate)[4]	100
Opening hours in a week [1] (physical)	66
Number of loans to be studied at home [2]	83 077
Number of users [3]	27 573
Number of study seats	1 069
Number of volumes available for free selection	95 202

1) The opening hours of the library department with the longest opening hours. The opening hours of individual departments do not add up! Physical denotes actual visit to the library rather than electronic communication.

2) Including loan period extensions.

3) Users registered by 31st December 2006 are listed, that is natural persons or legal entities registered by the library authorized to borrow collection documents (to be studied either in a study room or at home) and have not been newly registered or re-registered over the period in question.

4) Only the periodical titles are listed subscribed by the library itself (or received as a donation or exchange) in paper or electronic form are included; other periodicals with full-text access by the users within consortia are not included.

VUTIUM

In 2006, the VUTIUM Press organized three exhibitions of books it published in cooperation with BCES (the Quantum series, The Brno Universities, Brno Soul in Czech and English versions and others) – World of Books, Prague – May, Brno – November, International Book Fair in Frankfurt am Main – October.

On 12th to 13th December 2006, after an EUA conference and in cooperation with the BUT Centre of Education and Consulting, VUTIUM organized the 5th Seminar of the Chances of University Presses in the European Book Space series with the following programme:

- workshop on the experience of foreign groups of university presses and possibilities of establishing a Group of Czech University Presses
- changes in the copyright in the European context and open issues concerning works created by employees
- information on a law regulating the use of standards

VUTIUM published 10 new titles and 3 reprints.

VUTIUM's most important event was its tenth anniversary and the publishing of the books The Brno Universities and Spirit of Brno for the participants of the Association of European Universities (EUA) conference held in Brno.

CENTRE OF COMPUTER AND INFORMATION SERVICES (CCIS)

The main task in 2006 was the integration of systems and automation of information flows:

• **Automated administration flows**

The projects involving multiple CCIS and Rectorate departments include the implementation of a system of automated payment of social scholarships. A large part of the system is implemented using SAP, Apollo and the central database. Among other things, the option of having a scholarship sent abroad was already in use.

In 2006, the paper application forms distributed to the new students were replaced by electronic ones. The VUTLogin and VUTHeslo values needed for login are distributed through a secured login.vutbr.cz web application rather than using envelopes.

The basis of a document management system was established with its first part consisting of a central registry of contracts extended to faculties. This module contains over 1,000 contracts currently in force. A module was implemented for Bachelor's and Master's projects, doctoral theses and other final projects of students to be further enhanced by full-text content.

• **System Integration**

For all the parts of the BUT information systems, that is, SAP, Apollo, and Portál to work closely related as a whole, the following projects were implemented:

– redesign of all the central applications to enable access by a single personal identification number,
– creation of a VUTPin for less secure applications to be used for access to the BUT wireless network and, via eduroam , also to the networks of other universities,
– database documentation module,
– post-graduate student registration module,
– re-implementation of BUT contacts and business cards,
– creation of a XML communication multi-format interface for the central database to integrate the systems external suppliers, and BUT units. In 2006, the interface started to be used by the suppliers of the printing management systems and the access system.
– Implementation of a system for students to assess the teachers.
– Overhaul of the BUT language test.
– In the study part of the StudisVUT portal, when setting up the timetable, teaching may be selected visually.

In the study layer integration, the Faculty of Business and Management started to use the BUT Central Information System in 2006 while the Faculty of Electrical Engineering and Communication plans for such a transfer in 2007. The faculties of information technology and civil engineering still run a separate study layer.

Since the BUT Central Information System is used at FA, FBM, FFA, FME, and FC, these faculties can make a full use of the newly introduced student individual plan, which offers study control more user-friendly for both the students and study officers while using simpler algorithms. This new study methodology integrates the previous different procedures used to recognise the credits achieved and replace courses while making changes in curricula.

• **Plans Concerning Property and Payroll**

Each BUT employee can access a MyProperty personal property module enabling him or her to check on the property entrusted in his or her charge. An implementation unique in the Czech Republic was carried out of RFID chips to tag and identify the property in the new FIT buildings. RFID chips are placed in bar code labels.

The project of implementing a new method of deducting the cost of the meal coupons and meals directly from the pay of each employee used at the Rectorate at first was extended to cover all the BUT. Several departments of CCIS, Rectorate, and HRC joined to work on this project using the close links of the Apollo systems with the Central Database and SAP.

• **Further Enhancement of the Network and Communication Infrastructure**

(including the connections of students' rooms in the halls of residence)

In 2006, the backbone was mostly enhanced to accommodate devices supporting the 10 Gb/s rate, with as many 1 Gb and 10 Gb ports installed as was necessary to meet the demands of the sites. The network security and the information system of network administration at the halls of residence was improved, the BUT WiFi network was extended and new fibre optic routs built depending on the construction and reconstruction of BUT campuses.

New Hewlett-Packard and ExtremeNetworks L3 10 Gb/s switches were installed in the backbone. The 10 Gb BUT backbone network was newly brought to the Antonínská-1, Veveří-95, Technická-2, Purkyňova-118 and halls-of-residence nodes. Other nodes in areas with increased operating requirements were being provided with new equipment as necessary (mostly the BUT halls of residence where the number of student connections has risen from 3,500 in 2005 to 6,200). The Pod Palackého vrchem, Purkyňovy, and Listovy halls of residence were interconnected by independent 10 Gb circuits. The figure shows the present state of the BUT high-speed backbone network as compared with that of the beginning of 2006.

Access was improved at the Kolejní 4, Purkyňova 118, Gorkého 13, Rybkova 1, Technická 8, and Údolní 53 sites. In the FCE network, a pilot project was launched to test a new type of the Hewlett-Packard hp6200 10Gb L3 switch as the faculty central router and access point to the backbone network. Based on the positive results of the test, a new series of the hp5400/ 6200/ 3500 switches was used in the backbone network.

In 2006, attention was paid to the secure connection of the BUT network to the national network and secure operation of the BUT-halls-of-residence student network. Through an administration information system, the administrators of organisational units are informed on security incidents with the entire process - from reporting an incident to its resolution - was automated.

In addition to a high-speed network, since 2003, BUT has also been operating a WiFi wireless network. The increasing number of users has necessitated the installation of more powerful servers (WiFi gateway, VPN server, and radius server). Late in 2006, BUT joined the eduroam project to provide mobile connection for BUT staff and students in any place within the Czech Network of National Research and on to other academic and European networks.

In 2006, work was done on the following routes: Technická 2 (A6-200) land route – CSA F1 and F2 buildings. The newly built multipurpose sports hall – sports stadium (route length 950 m, including a cut of 650 m). The Purkyňova 93 – Technická 2 backbone connection was reconstructed and the FIT-Božetěchova node moved because of a new campus being built at Božetěchova 1.

Integrated BUT tools for creating publishing and using electronic multimedia form of teaching in all study forms and types.

The year 2006 saw the launching of the Moodle e-learning system now used for the distance and combined study as well as a study aid to be used by the full-time students. Moodle was closely integrated into the BUT portal offering single-sign-on access. A series of lectures on methodology was held throughout the year as well as e-learning training courses. In its first year of operation, the system contained 154 courses for BUT students, 23 courses for SAP users, 9 courses for course authors and users of this e-learning system, and a course designed for users of personal certificates, electronic signature, and server certificates.

- **Use of electronic signatures**

A BUT registration authority for the Cesnet certification authority was build and run in a pilot mode. USB tokens were used as repositories of electronic signature personal certificates rather than chip cards. Such tokens may be used for electronic signing even if no chip card scanner is available.

As part of chip pass introduction, a joint BUT-Komerční banka project was implemented, unique in the Czech Republic, of a universal student banking chip pass that can also contain an ISIC licence. The new banking cards manufactured in the international banking card centre contain a MIFARE contactless chip for the purposes of BUT and an EVM banking chip. Since September of 2006, these banking cards have been issued to more than 10 thousand students, who can activate these BUT passes as debit payment cards at bank.vutbr.cz, which was done by more than 300 students in the first few months. This project was also related to the launching of an electronic system for ordering ISIC passes and ISIC revalidation tokens at the isic.vutbr.cz portal.

- **Automated Submission of Information to Authorities and Institutions,**

particularly the Czech Social Security Administration, public health insurance companies, and labour offices.

The information to be submitted to the authorities, the Czech Social Security Administration, the health insurance companies, and labour offices is fully included by the output of the BUT information system.

• **Further Upgrade of the SAP Business Information System**

To upgrade the SAP 4. 6c system, a decision was made to pass directly to Version 6 marketed as ERP 2004s skipping Version 5. During the preparations for this version, work was started on the SAP Business Warehouse information system producing easy-to-read reports for managers.

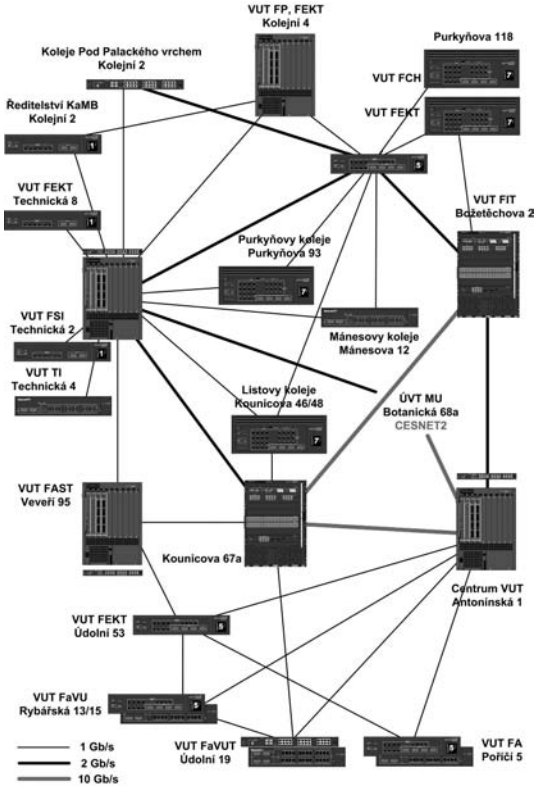
• **English Interface of the BUT Central Information System Modules**

In 2006 the English version was completed of the BUT public portal and the student part of the BUT website user interface. As the next step, the Apollo user interface will be translated into English.

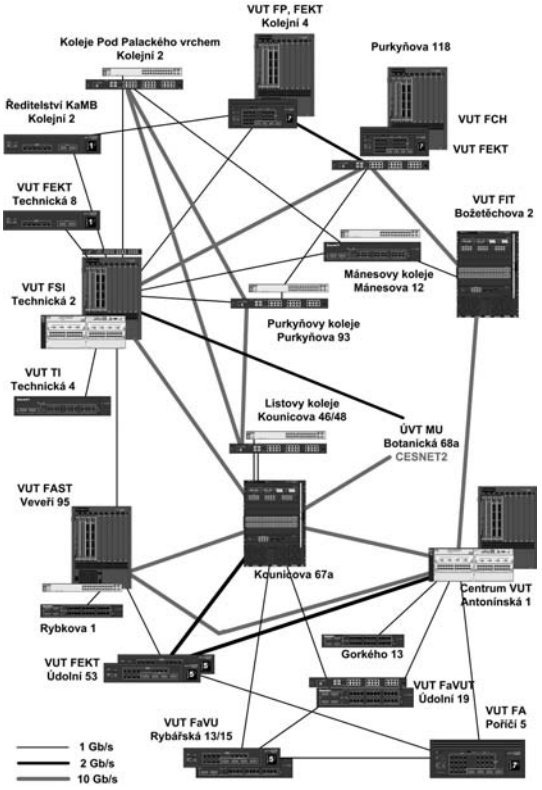
• **Central System Registering Publications and other Outcomes of Creative Activities**

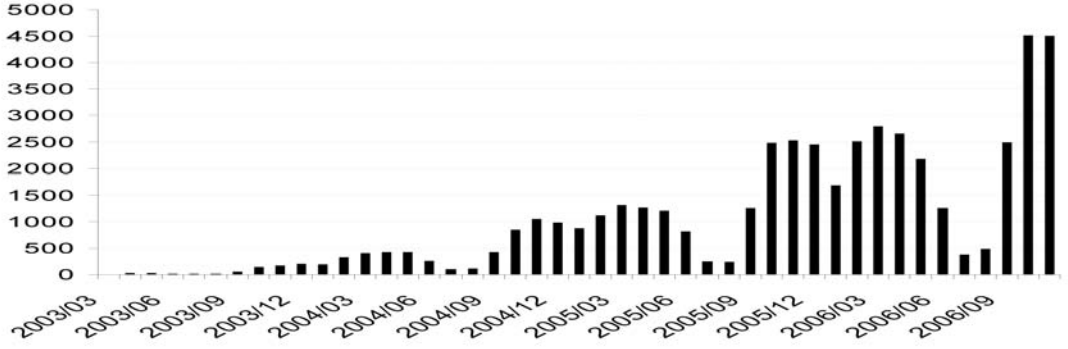
The Patents and Technical Products modules of the research and development component was fully transferred from the previous BRUTIS interface to the new Apollo IS . Now the old Brutis IS may be switched off. As a new feature, the R&D monitoring module has been launched that provides statistic information for by the management of BUT, faculties and institutes to be used for checking on the quality and performance of R&D activities.

Beginning of 2006



Beginning of 2007





The growing numbers of WiFi users from 2003 to the end of 2006

2. 13. R&D Infrastructure on National an International Scales

R&D Areas on which the University Concentrates

A SWOT analysis was carried out in 2006 of creative activities at BUT. This analysis, along with a forecast of the development of industries in the region, confirmed the priority strategic areas identified by BUT last year. Research and development at BUT focussed on the following key areas in an effort to achieve a world level of results while strengthening the research teams in these areas by younger generation to be more viable in terms of research complexity. A rather important goal was to establish closer ties with related industries. The following research areas were listed among the strategic ones:

- materials engineering and chemistry
- construction of aircraft
- communication technology
- cybernetics and artificial intelligence
- mechatronics
- information technology
- environmental technology and bio-technology
- non-traditional methods of generating, distributing, and using electrical energy
- water management
- reliability of building structures
- architecture and town-planning
- management of engineering enterprises

Research also concentrated on selected traditional areas, in which long-standing cooperation exists with industries and next on those areas in which BUT experts have reached outstanding results but are not, by the long-term R&D development strategy, given high priority. These include:

- nuclear power engineering
- manufacturing technology
- electrical technology
- consumer chemistry
- building structures
- geodesy
- transport machinery and equipment

Also the following artistic areas form an indispensable part of R&D activities:

- industrial design
- performance arts
- graphic, drawing, painting

Work on projects within research plans and those defined by research centres was also an important factor.

Goals of Research Plans at the University

In 2006 the following 8 research plans started on 1st January 2005 to be worked on:

- Drochytka - Building Materials (FCE)
- Stehlík - Environmental Technologies (FME)
- Jančář - Polymer Materials (FC)
- Svačina - Communication Technologies (FEEC)
- Cihlář - Advanced Materials (FME)
- Vrba - Electronics and Optoelectronics, Electrical Technologies (FEEC)
- Březina - Use of Computers, Robotics and its Applications (FME)
- Kazelle - Electronics and Optoelectronics, Electrical Technologies (FEEC)

Applications for 11 new research plan projects were submitted in February 2006 to be started on 1st January 2007 and, in December 2006, the results were published of a competition of new research plans. Three proposals won subsidies totalling 55 million CZK for 2007, others were recommended for funding, but were given no subsidies due to the limited resources of the Czech Ministry of Education, Youth, and Sports. The following table summarizes the results:

Subsidized Research Plans

Military Affairs, Informatics, Industries Research Area Group

Name of Research Plan	Total Points Awarded
• Štěpánek - Progressive Reliable and Durable Bearing Structures	632,5
• Jura - Intelligent Systems in Automation	621,5
• Hruška - Research of Information Technology in Terms of its Safety	611

Non-Subsidized Research Plans:

Military Affairs, Informatics, Industries Research Area Group

Name of Research Plan	Total Points Awarded
• Kotoul - Meso/macro-mechanics of deformation and fracture processes in progressive materials and structures	606,5
• Pavelek - Energetically economical heating, ventilating and air-conditioning devices for making friendly environment	606
• Říha - Reliability and risk analysis of water-management systems and constructions	569,5
• Roučka - Research of progressive technologies of processing promising construction materials	561
• Novotný - Research of sustainable resources in constructing buildings	482,5

Social Science Research Area Group

Name of Research Plan	Total Points Awarded
• Chybík - Architecture and town-planning between the modernism and post-modernism	528,5
• Němeček - Management as a tool of sustainable development	510

Bio-Sciences and Chemistry Research Area Group

Name of Research Plan	Total Points Awarded
• Zmeškal - Chemistry and technology of protection and conservation of the 20th century cultural heritage	520

Research and development laboratories unique in the Czech Republic, their equipment and major results in 2005

There are some unique laboratories at BUT including:

- testing laboratory of aviation technology (FME)
- laboratory for high-pressure and high-temperature syntheses of ceramics (FME)
- laboratory of structural analysis of metals (FME)
- laboratory of the physics of thin layers and surfaces (FME)
- laboratory of process engineering (FME)
- functional model of the Znojmo hydroengineering structure (FCE)
- functional model of the bottom outlet of the Les Království hydroengineering structure (FAST)
- laboratory of optoelectronic systems used to measure the parameters of the speed of flow (FCE)
- associated laboratories for testing bearing structures (FCE)
- laboratory of directional and satellite communication (FEEC)
- institute of computer graphics and multi-media (FIT)
- laboratory of cybernetics (FEEC)
- laboratory for synthesis of macromonomers (FC)
- laboratory for the preparation of fibre composites (FC)
- laboratory for biopolymers (FC)
- laboratory of shock failure of non-metal materials (FC)

Cooperation in the Czech Republic:

- SKANSKA CZ, a. s., ŽELEZNIČNÍ STAVITELSTVÍ, a. s., AQUATIS, a. s., ČESKOMORAVSKÝ CEMENT, a. s., METROSTAV, a. s., SAINT-GOBAIN ORSIL, s. r. o., GEODIS, s. r. o., BRNĚNSKÉ VODÁRNY A KANALIZACE, a. s.
- BOSH Diesel, HONEYWELL, SIEMENS, MESSING, BVV, AUTOPAL, s. r. o., ŠKODA AUTO, a. s.
- HONEYWELL, E.ON BOHEMIA, s. r. o., SIEMENS, AMIS (AMI Semiconductor), ON SEMICONDUCTOR, ABB, s. r. o., T-MOBILE
- PRVNÍ BRNĚNSKÁ STROJÍRNA, a. s., HABITANT, a. s., SVITAP JHJ
- KAUČUK KRALUPY, a. s., ALIACHEM, a. s., GUMOTEX, a. s., CPN, s. r. o., DELTA MLÝNY, a. s., EUROCORP, s. r. o., SYNPO, a. s., FATRA, a. s.

International Cooperation:

- Universities:
  University of Connecticut, USA
  University of Massachussetts, USA
  University of Berkeley, USA
  University of Colorado Boulder, USA

Università di Trento, Italy
Università Pisa, Italy
Università di Genoa, Italy
Technical University Hamburg-Harburg, Germany
University of Kaiserslauter, Germany
Technische Universität Wien, Austria
Technische Universität Graz, Austria
Technical University of Izhevsk, Russia
Technical University of Warsaw, Poland

- Companies:
  Dow Chemicals Europe, Switzerland
  PPG, Inc., USA
  Aisin Europe Manufacturing, Toyota Group
  Honeywell, USA
  Bosch Diesel, Germany
  Visteon, USA

Important projects

The important R&D projects financed from the targeted resources of the budget in which the university participates are listed in Table 8.

Use of Institutional Support for Specific Research at Universities

Institutional support for specific research as part of research conducted at a university is closely related to education provided in which students participate. The doctoral students at BUT may participate in grant projects at faculties. Funding is also available for supporting students' activities necessary for the completion of their studies (costs related to participation in international and national conferences, purchases of specialized literature, etc.).

3. QUALITY AND CULTURE OF ACADEMIC LIFE

3. 1. Social Affairs of Students and Employees

Under the University Act, Brno University of Technology awards 600 social scholarships and 10,000 accommodation scholarships monthly. These scholarships are paid from the targeted resources of the Ministry of Education, Youth, and Sports.

Social Benefits of Employees

The employer pays

– a contribution to the pension and life insurance of the employees
– a contribution to meals for employees

The employer also supports

– sports activities of the employees through BUT Centre of Sports Activities, also offering seminars and training courses
– further education of employees through BUT Centre of Education and Consulting offering various educational courses
– recreation of employees at the Ramzová and Vříšť BUT holiday resorts

3. 2. Disabled Candidates/Students at Universities

All the faculties put in some effort to promote the study of disabled students at the Gaudeamus education fair, when visiting secondary schools and at other instructive events. Only at the Faculty of Chemistry, the study of disabled students is more difficult as work in a chemical laboratory necessitates good health. Computer rooms are barrier free. Barrier free access is also ensured at all other faculties except the Faculty of Fine Arts. The study conditions are adapted to the individual needs of students. Faculties set up individual timetables offering cooperation with the tutor as needed in a particular course and assistance in cooperation with the Student Chamber of the BUT AS or the Union of Students. Electronic textbooks and other aids of a multimedia nature are available at most of the faculties; at FEEC, students may follow a laboratory lesson from virtual laboratories, FIT students are offered on-line lectures, students at FME were offered improved connection of their home computers to the academic network.

3. 3. Exceptionally Talented Students

The 2006 special awards and prizes won included:

Bohuslav Fuchs Prize: a collection of works by FA students Martin Klenovský and Roman Čerbák entitled „Centrum Valencia – Town-Planning and Architectural Solution".

4th place in the European round of the Microsoft Imagine Cup Bc. Daniel Široký, FEEC
– for the prototype of an intelligent white stick.

Silver Medals of BUT awarded to the Speech@FIT research group - Ing. Lukáš Burget, Ph.D., Ing. Pavel Matějka and Ing. Petr Schwarz from the Faculty of Information Technology for excellent research results in 2006.

Award of Prof. Ing. Jan Hlavička, DrSc., given to Ing. Lukáš Stareček, Ing. Michal Bidlo, Ing. Jaroslav Škarvada, Ing. Miloš Ohlídal, and Ing. Tomáš Pečenka for the excellent paper presented at the Czech-Slovak Computer Architecture & Diagnostics seminar of the FIT doctoral students.

The Josef Hlávka 2006 Prize given to Ing. Zdeněk Vašíček from FIT for his research results.

Josef Hlávka Prize + BUT Rector Prize:
to Ing. Pavel Pokorný (Mathematical Engineering) – FME.

Honorary Mention in the AFCEA 2006 student competition organized by the Czech branch of Armed Forces Communications & Electronics Association was won by Bc. Tomáš Karásek – FIT – for best student paper on information and communication systems.

Second place in the AFCEA 2006 student competition organized by the Czech branch of Armed Forces Communications & Electronics Association was won by Petr Blaháк and the third place went to Bc. Jaromír Smrček – both from FIT.

In the worldwide Microsoft Imagine Cup, FEEC students Petr Kaleta, Martin Bambas, Aleš Šturala and Daniel Široký from FIT achieved tremendous success for designing an intelligent white stick.

Achievement Award Certificate was won at the 15th International Conference on Computer and Information Science and Engineering by doc. Ing. Lukáš Sekanina, Ph.D., Ing. Michal Bidlo, and Ing. Radek Bidlo from FIT.

GE Foundation Scholar-Leaders Program 2005–2006, in the second annual scholarship programme for the Czech Republic for 15 excellent second-year students from five selected Czech universities (Czech Technical University in Prague, Czech University of Life Science in Prague, Masaryk Univesrity in Brno, VŠB-Technical University of Ostrava, and Brno University of Technology) in economics, management, engineering and technology, 5 FIT students: Patrik Beck, Juraj Blaho, Petr Kaštovský, Martin Košek, and Lukáš Soľanka won scholarships.

Success in the NOVATechCom international competition of business plans in advanced technologies was marked by FIT students Bc. Tomáš Bátrle, Bc. Jiří Musil, and Bc. Marek Žídek.

Success was marked by the speaker recognition system designed by the Speech@FIT group in the **NIST 2006 Speaker Recognition** Evaluation organized by the U.S. National Institute of Standards and Technology with 37 laboratories from the entire world attending (due to the NIST rules, the exact placement cannot be published).

Ing. Pavel Matějka went to the final round of the **Student Paper Contest** at the prestigious **International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2006) at Toulouse, Francie** for his paper „Use of Anti-models to Further Improve State-of-the-art PRLM" with co-authors Ing. Petr Schwarz and Ing. Lukáš Burget – all of them from FIT.

Preciosa Foundation Prize:
Jana Kudělková – FC
Ing. Lucie Šestáková (Applied Mechanics – Engineering Mechanics) – FME
Ing. Jiří Toul (Quality Management) – FME

Czech Head – Gaudeamus Award:
Petr Kubíček (fifth-year student of the aircraft construction programme) – FME

South Moravian Region Scholarship for exceptionally talented students:
Eva Molliková (first-year student of Mathematical Engineering programme) – FME

Beba Prize 2006 (Italy):
Martin Nečas (industrial-design student) – FME

Aircraft Design and Handling Competition (Great Britain) – 1st place went to
Petr Kubíček, Radek Palička, Jiří Miček, Ivan Březina – students and graduates of the Institute of Aviation at FME.

At the Faculty of Business and Management, **four Dean Awards** for exceptionally good Master`s degree projects and one Dean Award for excellent Bachelor`s degree project were given. Petra Kinclová, a first-year Bachelor`s degree student of tax consultancy represented FBM at the Czech Championship in Text Processing held in Prague in December 2006. She was awarded a special scholarship for excellent representation.

For extraordinary study achievements (good marks, awards obtained in the faculty and national rounds of the student research competition, good presentation of the faculty during study stays at domestic and foreign universities, etc.) the Dean of the Faculty of Civil Engineering gave **SIGNUM PROSPERITATIS** medals to: Iva Frýbortová, Miroslava Hruzíková, Jan Koláček, Lucie Šancová, Petr Huňka, and Svatopluk Zobek, who also received a BUT Rector Award.

For extraordinary study achievements, good presentation of the faculty at conferences and during study stays at domestic and foreign universities as well as for perfect organization of the JUNIORSTAV conference, the Dean of the Faculty of Civil Engineering, on the occasion of the BUT`s 107th anniversary, gave **SIGNUM PROSPERITATIS** medals to the following doctoral students: Ing. Miroslav Špano, Ing. Jan Sasín, Ing. Michal Kuruc, Ing. Ladislav Řoutil, Ing. Ondřej Šikula, and Ing. Tomáš Černický.

The Dean of FCE also rewarded David Čech for his most extraordinary sporting achievement - swimming across the British Cannel in both directions. This student received a BUT Rector Prize being listed among the best athletes of the South Moravian Region.

Achievements of students and graduates of the Faculty of Fine Arts in 2006:
– Barbora Klímová, graduate from the Painting Studio 3, r**eceived a Jindřich Chalupecký Award**

– Soňa Goldová, graduate from the Environmental Studio, **received the main prize of the Henkel Art Award competition**

– Martin Búřil, graduate from the Graphic Studio, **was 1st in an Aero Shortie competition of short up-to-10 minute films**, organized by the Aero Praha club cinema

– Matěj Říčný, student of the Product Design Studio, **received a special prize of the Aqua Trade competition**

– Jaroslav Gereg, student of the Product Design Studio, **received a prize of the visitor of the Aqua Trade competition**

– Kristýna Greplová, student of the Graphic Design studio, **won the main prize of the BUT competition for a new visual style of printed matter**

– Jana Malíková, student of the Graphic Design studio, **won a prize of the BUT competition for a new visual style of printed matter**

3. 5. BUT First Degree (gold) Medals awarded in 2006

- prof. RNDr. Ing. Jan Vrbka, DrSc., Dr. h. c.

  for his distinguished contribution to the development of Brno University of Technology

- prof. Denys Khusainov

  for his long-standing excellent teaching and research activities at BUT

- prof. RNDr. Miroslav Liška, DrSc.

  for his accomplishments in the development of BUT and significant contribution to the development of higher education

- prof. Ing. František Musil, CSc.

  for his lifelong achievements in the development of the technology of buildings field of study and of the Faculty of Civil Engineering

- prof. Ing. Miloslav Kučera, DrSc.

  for his lifelong achievements in macromolecular chemistry

3. 6. Accommodation and Catering Services

Table 10 Student Care - Accommodation and Meals at BUT

Total number of beds at BUT halls of residence	6 974		
Number of beds for student accommodation	6 760		
Number of beds for staff accommodation	130		
Number of beds for university guest accommodation	84		
Number of beds in hired facilities			
Number of accommodation applications submitted until 31st December 2006	8 908		
Number of accommodation applications granted until 31st December 2006	6 883		
Monthly accommodation price in CZK by category	**students**	**staff**	**others**
A – cell system	1 720 – 2 600	2 000 – 3 000	
B – double, triple, etc. rooms	1 505 – 2 100		
C – others			
Price of one main meal in CZK	**students**	**staff**	**others**
	19 and 26,5	19 and 26,5	48,5 and 56
	Including:		
Total number of main meals sold in 2006	**students**	**staff**	**others**
	1 689 287	116 602	141 969

4. INTERNATIONALIZATION

4.1 BUT Strategy in International Cooperation, Priorities

The university's long-term strategic objective is its internationalization, which should become its important characteristic feature in the future. BUT aims to become an important part of the European educational and research space, prestigious European technical university concentrating on basic and, even more, applied research as well as on cooperation with industries. As the demographic curve and the qualified forecasts based on it suggest, no extensive increase in the number of domestic students can be expected. For this reason, a strategy was devised of international cooperation with foreign universities to increase the interest of students in studying at BUT. In the years to come, the following areas will be given precedence by BUT:

1. Accreditation of new, preferably interdisciplinary, and inter-faculty degree programmes including new international and inter-university double-degree and joint-degree programmes.
2. Admitting more international students to all degree-programme types.
3. Creation and accreditation of distance- and combined-form degree programmes.
4. Marketing support using all the positive facts.
5. Upholding the university`s research standard and increasing the number of doctoral students while keeping the study quality at the same or higher level.

The above document then describes in more detail the strategy specifying the strategic objectives and ways of achieving them. It stresses that only the most experienced teachers from abroad should be invited who are among the best in developing new progressive technologies and that also only the best candidates from abroad should be admitted who are aware of the fact that the university will provide them with lifelong education indispensable in the 21st century knowledge society.

The increase in the number of international students must necessarily be accompanied by academic staff mobility. BUT may boast a 2nd place in the Czech rating and 5th in the European one of academic staff mobility (SOCRATES/ERASMUS). However, even this favourable development is not leaving the university management satisfied and so pressure is brought to bear on the faculties to increase the numbers of foreign teachers (especially the non-European ones) invited for entire-semester or entire-course stays or for individual lectures or series of lectures. BUT has signed 43 active cooperation agreements concerning both research and teaching with Europe's and world's leading universities while several other agreements are in the pipeline. More complex realization of these agreements is to be seen as one of the ways to internationalization.

4. 2. BUT Involvement in International Educational Programmes and Joint Degree Programmes

There is one fully accredited follow-up Master`s joint-degree programme at BUT called Economics and Management with European Business and Finance as a study field. This programme is shared with The Nottingham Trent University, UK and the Economic University of Karol Adamiecki, Katowice, Poland. Cooperation also exists on several other joint programmes based on cooperation agreements. Another two joint-degree programmes will be prepared for accreditation in 2007.

4. 3. Membership of BUT Staff in International and Professional Organizations

A full list of those BUT teachers and research workers who are members of international and professional organizations exceeds the scope of this annual report and, therefore, it is not included. For rough orientation, see Table 1.

4. 4. Student and Teacher Mobility

Table 11a, b, c University Involvement in Programmes of International Educational Cooperation

EU Educational and Vocational Programmes

Programme	Socrates Erasmus	Socrates				Leonardo
		Comenius	Grundtvig	Lingua	Minerva	
Number of projects	1		2			
Number of in-students / total student-months	290 / 1830					30 / 176
Number of out-students / total student-months	210 / 927					7 / 27
Number of out-teachers / total teacher-weeks	134 / 211		3 / 3			
Number of in-teachers / total teacher-weeks	38 / 39					
Subsidy (thousand CZK)	21 196		262			2 220

Other Programmes

Programme	Ceepus	Aktion	Others
Number of projects	2		2
Number of in-students / total student-months	5 / 20		1 / 6
Number of out-students / total student-months	7 / 24		5 / 5
Number of out-teachers / total teacher-weeks	4 / 4		3 / 5
Number of in-teachers / total teacher-weeks	1 / 2		
Subsidy (thousand CZK)	195		

Note: The Others column lists all the degree programmes that cannot be categorized otherwise.

Other Stays Abroad

Programme	Government scholarships	Direct inter-university cooperation / including Development Programmes	
		Europe / including Development Programmes	outside Europe / including Development Programmes
Number of in-students / total student-months	3 / 12	(86 / 362)* Dev. Progr.	(8 / 47)* Dev. Progr.
Number of out-students / total student-months	9 / 96	(39 / 92)* Dir. Coop.	(3 / 12)* Dir. Coop.
Number of out-teachers / total teacher-weeks		(7 / 7)* Dev. Progr.	(1 / 2)* Dev. Progr.
Number of in-teachers / total teacher-weeks		(10 / 10)* Dir. Coop.	

** Number of outgoing (incoming) students (teachers) / total number of student-months (teacher-weeks).*

4. 5. Programmes Taught in Foreign Languages

BUT offers a range of programmes accredited for teaching in a foreign language. However, only a small percentage of students sign up for an entire degree programme. An amendment to the University Act, under which a degree programme taught in a foreign language has to be paid for, has done away with a much sought for programme attended, apart from international students paying for their studies, also by a numerous group of Czech students. As the BUT Mission Statement foresees an increasing proportion of courses taught in English, all the faculties are trying to teach at least some of the courses of the Czech degree programmes in English. Table 12 lists degree programmes accredited in English.

Table 12 Degree Programmes Accredited in English

Programme Groups	Degree Programmes							
	Bac.		Mag.		Follow-up Mag.		Doct.	
	English	language	English	language	English	language	English	language
Total	6	-	2	-	6	-	11	-

5. ENSURING THE QUALITY OF ACTIVITIES CARRIED OUT AT BUT

5. 1. General Principles and Approaches

Quality assurance is viewed by BUT as two inseparable processes: achieving the quality and evaluating it. In assuring quality, BUT adheres to the relevant national and international documents complying with their recommendations. It conceives quality as suitability for a purpose. The goals and tasks related to permanent improvement of environment and activities are a strategic priority for BUT and, as such, are incorporated in its Mission Statement. They are being specified in more detail in each of its annual updates and are carried out as parts of the MEYS Development Project managed by the rector. A work group was established at BU in 2006 (consisting of 6 teachers and 3 doctoral students) to deal with quality assurance and build a suitable system for this purpose to serve the entire university in 2007. The group members maintain their competences by attending seminars and conferences focussed on quality assurance on a national (MEYS – BP Group, Centre for University Studies) and international (EUA, EAIR, ESMU) scale.

5. 2. Internal Quality Assurance

In 2006 quality was assured at BUT mainly by concentrating on the management and decision-making processes, education and its relationship to the labour market, research and development, and student affairs. Activities were carried out using the university's own resources and sharing experience with other organizations and universities (MEYS-BP Group, Centre for University Studies, UWB Plzeň, VŠB – Technical University of Ostrava, Masaryk University, Janáček Academy of Music).

a) Since university management is a new area, the rector has decided that it should be given due attention as there is a considerable leeway for improving the quality of the institution by perfecting the management and decision-making processes. An analysis was made of the processes taking place at the Rectorate and in the departments of the vice-rectors and the bursar. The results of the analysis showed that some important processes are not carried out sufficiently or are performed without sufficient system and organizational support. The analysis also pointed out that the Rectorate needs restructuring suggesting the necessary scope and direction of such a reform. A new structure of the Rectorate was proposed and commented on both internally and externally; it will be carried out step by step in 2007.

To improve the human resources in management, internal training courses were held for university and faculty academic officials, to which leading experts from the central authorities, universities and the practice were invited.

b) Education has long been the centre of attention. Substantial improvement has been achieved by introducing new accredited degree programmes, interdisciplinary programmes, by offering programmes taught in English and joint-degree programmes, by increasing the international student numbers, etc. Human resources for education were developed in 2006 by offering internal courses attended mostly by young teachers with a doctor's degree who aspire to a higher pedagogical or research degree.

Evaluation of the quality of education is done in the form of accreditation, inspection of teaching, and pedagogic meetings, during organized and spontaneous interviews with students, and by means of systemized student evaluation of the teachers. This has become a regular procedure at all the BUT faculties since 1998; efforts are made to unify the related periodicity and methodology as well as to apply the results consistently. BUT representatives are among the solution co-providers and consultants for the national student development project focussed on this area of evaluation.

c) The links between education and the labour market are being watched as an important guide for setting up and innovating degree programmes. In cooperation with labour offices, the employment rate of graduates is being monitored; every other year, feedback questionnaires are used to enquire about the satisfaction of the graduates with the theoretical background and skills provided by the study; views of the employers on the suitability of degree programmes, the level of graduates and their ability to apply their education are measured in direct cooperation with the practice and during events such as Days of Companies organized annually at faculties in order to establish direct contacts and cooperation between the university, the students, and the employers.

d) Research and development activities are watched systematically and consistently due to their importance for society. Both the quantity and quality of the projects worked on are being increased as is the degree of their inter-disciplinarity and cooperation on a personal as well as institutional scale, emphasis is placed on fruitful implementation of the results in the practice, the European dimension of the projects is getting to the forefront. As a consequence, the complexity of project administration is growing as is the number of risks related to work on projects. For this reason, BUT was improving process approaches to the management of research and development projects.

The results of research and development projects are assessed according to the instructions provided by the project providers with the results being also used as the underlying materials for deciding about the approval of other projects and grants.

The development of R&D human resources is supported by internal courses focussed on project administration, process management, risk management, etc. Especially for young doctoral graduates, an internal course will be held (in cooperation with the Czech Academy of Sciences) on the methods and ethical dimensions of research.

e) Student affairs include mainly accommodation and meals as well as sports and leisure activities. This is continually monitored by a Supervisory Committee chaired by the vice-rector for education and student affairs. Members of this committee include the director of BUT Halls of Residence and Canteens, representatives of the BUT AS and the Student Chamber of the BUT AS as well as members of the halls-of-residence self-administration. A working group is guided by internal regulations, at regular meetings, assessing the level of services provided, discussing suggestions by students, and proposing measures for improvement.

5. 3. External Quality Assurance

No external quality assessment, except accreditation procedures, took place at BUT in 2006. Attention was paid to the implementation of selected recommendations for BUT resulting from the national (Centre for University Studies) and international (EUA) external assessment performed in 2005. In 2006 preparations were under way for a follow-up inspection visit of the inspection organizations and teams expected for 2007 or 2008.

In 2006 BUT participated in the OECD project Thematic Review of Tertiary Education and was one of the schools visited by the evaluation team.

5. 4. Internal and External Quality Assurance through International Benchmarking

In 2006 BUT took part in the ESMU University Management Benchmarking Programme project (Brussels) based on a combination of internal and external quality assurance in management and decision-making processes. The project was based on a process analysis focussing on: internal and external quality assurance processes; marketing in higher-education institutions; student services; innovative teaching and learning. The system involved writing an internal evaluation report by answering related questions, assessment of such a report by an independent referee from abroad, the solution providers attending a working seminar to discuss the solution results and compare them to share experience. In April 2007, the project is scheduled to be finished by a final evaluation report being distributed by the organizers to the participants.

6. UNIVERSITY DEVELOPMENT

6. 1. Involvement in the MEYS Development Programmes

Providing valuable assistance, the development programmes of the Czech Ministry of education, Youth, and Sports (MEYS) are indispensable in terms of university management. Last year the university staff was involved in 35 development projects receiving a total fundingl of more than 130 million CZK. The projects have contributed to the development of faculties and BUT as a whole in a scope exceeding the budget resources. Final reports of these projects can be found at the university website. Table 13 lists the development programmes and the funding received.

Table 13 BUT Involvement in the 2006 Development Programmes for Universities

Development programmes for universities	Number of projects submitted	Number of projects accepted	Funding received (thousands of CZK)	
			capital	current
Support for the development of degree-programme modular structure	11	11	2 436	44 284
Preparation and development of human resources	6	6	480	11 817
Development of modern technologies	5	5	28 036	14 738
Support for structures common for universities and customers	4	4	0	1 834
Support for internationalization	6	6	0	22 186
Support for quality management improvement at universities	2	2	0	3 598
Support for efforts to increase of the interest of talented youth in engineering and scientific studies	1	1	0	700
Total	**35**	**35**	**30 952**	**99 157**

6. 2. Involvement in the University Development Fund Projects

In the University Development Fund competitions, BUT was traditionally successful. Almost 59 million CZK were received in a total of 193 programmes in 2006. Especially the involvement of students in the work on the Thematic Group G projects may be seen as very positive. The thematic groups and their projects are listed in Table 14.

Table 14 BUT Involvement in the University Development Fund Programmes

Thematic group	Number of projects accepted	Funding received (thousands of CZK)		
		capital	current	Total
A	23	33 403	33 403	
B	1		247	247
C	1		249	249
E	1		496	496
F	89		15 372	15 372
G	78		9 168	9 168
Total	**193**	**33 403**	**25 532**	**58 935**

6. 3. Involvement in Projects Financed from the Structural Funds

Table 15 Funding Received from the EU Structural Funds

Operative programme (name)	Measure (name)	Project	Implementation time	Funding received (thous. CZK.) current / capital	Funding received (thous. CZK.) for 2006 current / capital
Human resources development	3. 2	Development of teaching skills	5. 1. 2006 – 4. 1. 2008	4 777	1 849
Human resources development	3. 2	Teaching humanities at BUT	5. 1. 2006 – 21. 5. 2007	1 410	736
Human resources development	3. 3	Training in digital design for lectors, consultants and vocational training teachers	25. 1. 2006 – 24. 1. 2008	4 829	1 414
Human resources development	4. 1	System of internal training and adaptability of university staff	1. 5. 2006 – 30. 4. 2008	5 091	1 248

Table 16a Projects Receiving Programmed Funding - Construction

Project no.	Project name	Planned at year-beginning *)	Stage **)	Total costs	Including subsidies from state budget				Current year costs		
					Total	including:			Total	including:	
						Chapter 333 MEYS	Co-financed by EU	Other resources SR		From Chapter 333 MEYS	from other resources
23334O4304	Reconstruction and completion - BUT campus at Božetěchova, Brno	A	R	689 836		621 432				210 814	9 524
23334O4310	Božetěchova campus – active elements, interior	A	R	88 413		49 206				6 802	6 959
23334O4311	Božetěchova campus – structural reinforcement, reconstruction of refectory and outside surfaces	A	R	60 265		51 122				15 787	1 137
23334O4307	BUT PPV campus - multipurpose sports hall	A	R	110 680		44 533				44 533	36 941
2333494307	BUT PPV campus, Building A2, thermal insulation, new windows	A	D	11 469		11 119				10 300	1 122
Total											

**) Construction included in budget at year-beginning – A, not included – N*

***) Project at preparation stage at year-end – P, project is being implemented – R, project finished by year-end – D*

Table 16b Projects Receiving Programmed Funding - other investments

Project no.	Project name	Planned at year-beginning *)	Stage **)	Total costs	Including subsidies from state budget				Current year costs		
					Total	including:			Total	including:	
						Chapter 333 MEYS	Co-financed by EU	Other resources SR		From Chapter 333 MEYS	from other resources
Total											

No projects receiving programmed funding.

7. CONCLUSION

As a most remarkable success achieved may be viewed the appearance of BUT on the list of the world's top 500 universities as presented by the British Times journal. Based on the degree of international cooperation, the quality of teaching, research and development and on a number of other indicators, this independent international assessment was conducted at 18,000 universities of the world. BUT and Charles University in Prague, as the only Czech higher-education institutions, were among the world's best 500 universities.

BUT's activities and development were guided by the principles of the BUT Mission Statement and its amendment for 2006. The structure and main objectives of these documents are harmonized with those of the Mission Statement of the Ministry of Education, Youth, and Sports. For BUT, too, internationalization, quality, and excellence of academic activities as well as the quality and culture of academic life are top priorities.

As compared with previous years, the application of Development Projects had more significant impact providing support almost indispensable for achieving the strategic objectives. A major proportion of the funding received from the Development Programmes was used to support activities related to the BUT development priorities and to promote inter-university cooperation both inside and outside Brno (UWB Plzeň in particular).

BUT participated in the meeting of university rectors held in Brno in the autumn, organized by EUA and all the Brno universities.

In the second half of the year 2006, much attention was paid to cooperation with Masaryk University in Brno on the organization and design of a joint research project to receive funding from the EU structural funds (the Science and Development for Innovation programme).

Strategic thoughts on the future development of the university were no doubt influenced by the report given by OECD experts on the situation of tertiary education in the Czech Republic. A number of BUT experts were members of the national team participating in the creation and content of this report mostly in discussions with foreign specialists.

With foreign experts BUT cooperated also during their evaluation visit to the Czech Republic and Brno.

APPENDIX 1

Table 1.4. BUT Membership in International and Professional University Organisations

Organization	Country	Status
Czech Conference of Rectors	CZ	member
Council of Higher-Education Institutions	CZ	member
Accreditation Committee	CZ	member
AESOP	NL	member
AEEA-EAAE	B	member
DOCOMOMO	F	member
UNESCO/UIA	F	member
Scientific Committee for UIA Congress	F	member
ELIA	NL	member
Czech and Moravian Electrical and Electronic Association	CZ	member
ISEKI-Food Association	A	member
Association of Chemical Companies	CZ	member
Society of Plastics Engineers (SPE)	USA	member
Royal Society for Chemistry	GB	member
American Chemical Society	USA	member
Materials Research Society	USA	member
International Humic Substances Society	USA	member
European Photochemistry Association	GB	member
International Water Association (IWA)	GB	member
International Water Association (IWA)	CAN	member
European Association of Chemistry and Environment	L	member
Global Water Partnership (GWP)	S	member
International Pyrotechnics Society	USA	member
AECEF	EU	member
FTBG	D	member
EUCEET	EU	member
FENAI	B	member

IABSE	EU	delegate on permanent committee
CIB	EU	member
Czech Logistic Association	CZ	member of presidium
Gesellschaft für Angewandte Matematik und Mechanik (GAMM)	D	regular membership since 1986
European Association for Theoretical Computer Science (EATCS)	B	regular membership since 1987
European Society for Engineering Education (SEFI)	S	regular membership since 1991
American Mathematical Society (AMS)	USA	membership since 1994
Ministry of Justice	CZ	forensic expert appointed by Minister of Justice in economics, cybernetics, and computing technology, criminology – data protection, copyright
Legislative Council of the Government	CZ	member
International Institute of Forecasters	USA	advisor since 1999
Association of Accountants and Tax Advisors	CZ	honorary membership
MAMP – Moravian Association of Female Entrepreneurs and Managers	CZ	honorary chairperson since 1999
Finance Magazine (ISSN 1214-0880)	CZ	member of editorial board
Réseau PGV – Université Pierre Mendés Grenoble II.	F	regular membership
The Poradce (advisor) journal	CZ	editor in chief
Association of Accountants and Tax Advisors	CZ	vice-president
Institute of Industrial Engineers	CZ	president
Czech Society for Mechanics	CZ	vice-chairperson, member
Association of Engineers	CZ	member, chairperson, vice-chairperson
Czech Statistical Society	CZ	board member
Czech Society for New Materials and Technologies	CZ	member of steering committee
Czech Society for Nondestructive Testing	CZ	chairperson
Czech Foundry Society	CZ	member of executive committee
Czech Mathematical Society	CZ	committee member
Czech Physical Society	CZ	member
Society of Czech Engineers	CZ	member
Czech Chamber of Authorized Engineers and Technicians	CZ	chairperson of examination committee

Czech Association for Wind Energy	CZ	board member
Society of Czech Engineers	CZ	member
International Project Management Association	GB, N	member
The International Society for Optical Engineering	USA	member, committee member
World Energy Council	GB	member of National Committee
International Deep Drawing Research Group	GB	representative of Czech Republic
International Council of the Aeronautical Science	NL	representative of Czech Republic
IFTToM	GB	committee member
AREO	F	Czech committee member
International Energy Agency	F	member of ECBCS executive committee
European Federation of Chemical Engineers	GB	member
American Society Of Mechanical Engineers (ASME)	USA	member

APPENDIX 2

Table 5_2 Doctoral Graduates

Faculty	Name	Thesis and Supervisor
FCE	Mgr. Petra Proudová	Assessing the Quality of Thin-Walled Ceramic Materials by the Impact-Echo Method. Supervisor doc. Ing. Luboš Pazdera, CSc.
FCE	Ing. Jana Šenkapoulová	Strategic Evaluation of Water Loss Level in Water Management Entities. Supervisor Ing. Ladislav Tuhovčák, CSc.
FCE	Ing. Pavel Viščor	Reliability of Water-Supply Networks. Supervisor Ing. Ladislav Tuhovčák, CSc.
FCE	Ing. Vladimíra Žufanová	Monitoring Procedures at Cadastral Authorities and their Offices. Supervisor doc. Ing. Josef Weigel, CSc.
FCE	Ing. Jaroslav Benda	The Material Types Used to Build a Home and their Impact on the Price. Supervisor prof. Ing. Rostislav Drochytka, CSc.
FCE	Ing. Pavel Sršeň	Economical Aspects of Material Durability in Terms of the Cause of Building Structures. Supervisor doc. Ing. Karel Kulísek, CSc.
FCE	Ing. Eva Hynková	Properties of a Filtering Environment for Natural Methods of Wastewater Treatment. Supervisor prof. Ing. Jan Šálek, CSc.
FCE	Ing. Vladimír Habr	Analysis of Underlying Rain Measurement Data for Designing, Assessing, and Managing Urban Drainage. Supervisor doc. Ing. Jan Mičín, CSc.

FCE	Ing. Jan Plachý	Changes of Asphalt Insulation Bands Joints on Single Layer Flat Roofs Due to Temperature Over Time. Supervisor doc. Ing. Antonín Fajkoš, CSc.
FCE	Ing. Dita Matesová	Fracture Mechanic Parameter of Quasi-Fragile Materials at High Temperatures for Numeric Modelling. Supervisor doc. Ing. Zbyněk Keršner, CSc.
FCE	Ing. David Lehký	Inverse Stochastic Analysis of Concrete Structures. Supervisor prof. Ing. Drahomír Novák, DrSc.
FCE	Ing. Marie Rusinová	Interaction of Museum Depositories and Textile Archival Documents. Supervisor doc. Ing. Milan Vlček, CSc.
FCE	Ing. Hana Staňková	Identity of Trigonometric Points and Inter-System Transformations in Brno and its Surroundings. Supervisor doc. Ing. Josef Weigel, CSc.
FCE	Ing. Josef Podstavek	Calibration and Integration of Orientation Systems in Photogrammetry. Supervisor doc. Ing. Vlastimil Hanzl, CSc.
FCE	Ing. Karel Šuhajka	Renovation of Damp Masonry of Constructions – Use of a Rod Aerial in Microwave Drying of Masonry. Supervisor doc. Ing. Miloslav Novotný, CSc.
FCE	Ing. Josef Brauner	Use of Concrete Recyclates in Cement Industry. Supervisor doc. Ing. Marcela Fridrichová, CSc.
FCE	Ing. Tomáš Fojtík	Verifying the Possibility of Increasing the Durability of Some Concrete Types by Applying Waste Materials and Additives with Puzzolan Properties. Supervisor prof. Ing. Rostislav Drochytka, CSc.
FCE	Ing. Zdeněk Donát	Diagnostics of Reinforcement Corrosion in Reinforced-Concrete Structures. Supervisor prof. Ing. Rostislav Drochytka, CSc.
FCE	Ing. Jan Škramlík	Humidity in Building Structure Hollows. Monitoring Humidity Propagation Using an Electromagnetic Microwave Method. Supervisor doc. Ing. Ivan Moudrý, CSc.
FCE	Ing. Pavel Marek	Interaction of Structures and Mineral Environments. Improving the Properties of Ground Soils by Gravel Pillars. Supervisor doc. Ing. Jan Masopust, CSc.
FCE	Ing. Stanislav Martinec	Behaviour of Reinforced-Concrete Components Subjected to Shear. Supervisor doc. Ing. Jaroslav Navrátil, CSc.
FCE	Ing. Michala Hubertová	Development and Study of the Properties of Light High-Quality Concretes. Supervisor doc. Ing. Rudolf Hela, CSc.
FCE	Ing. Šárka Havlíčková	Preparation and Properties of Calcium Sulphate Dehydrated in Saline. Supervisor doc. Ing. Marcela Fridrichová, CSc.
FCE	Ing. Miroslav Řičánek	Use of Energogypsum for Producing Non-Traditional Gypsum Binders. Supervisor doc. Ing. Marcela Fridrichová, CSc.
FCE	Mgr. Alexandra Erbenová	Factors Influencing the Mechanical Behaviour of Clay Soils. Supervisor doc. Ing. Kamila Weiglová, CSc.
FCE	Ing. Abayomi Omishore	Fuzzy Sets and Stochastic Methods and Their Applications in Building Industry. Supervisor doc. Ing. Zdeněk Kala, Dr.

FCE	Ing. Martin Cikorek	Mathematical and Economic Modelling of Problems in Managerial Decision Making of a Construction Firm. Supervisor doc. Ing. Leonora Marková, Ph.D.
FCE	Ing. Vít Hromádka	Modelling and Simulating Investment Projects. Supervisor doc. Ing. Jana Korytárová, Ph.D.
FCE	Ing. Igor Neckář	Long-Term Monitoring of Construction Quality in Assessing Real Property. Supervisor doc. Ing. Leonard Hobst, CSc.
FME	Ing. Jaroslav Nachtigal	Unified Visual Style in Industrial Design. Supervisor doc. Ing. arch. Jan Rajlich.
FME	Ing. Radim Blecha	Adaptive Properties of Industrial Robots in Handling and Assembly Operations. Supervisor doc. Ing. Ivan Vavřík, CSc.
FME	Ing. Jiří Kubíček	Wet Cleaning of Energogas before Its Use in a Combustion Engine. Supervisor doc. Ing. Ladislav Ochrana, CSc.
FME	Ing. Jiří Martinec	Developing an Experimental Probe for Measuring Carbon Oxide in Municipal-Solid-Waste Incineration Plants. Supervisor doc. Ing. Zdeněk Skála, CSc.
FME	Ing. Klára Hanzlíková	Influence of the Isothermic Transformation Duration on the Micro-Structure and Fatigue Properties of ADI. Supervisor doc. Ing. Stanislav Věchet, CSc.
FME	Ing. Zdenka Obšnajdrová	Quantification of Heat Deformations in Production and Measurement During Finishing Operations. Supervisor doc. Ing. Jiří Pernikář, CSc.
FME	Ing. Miroslav Šplíchal	Increasing the Safety of Civil Aviation by Implementing Reliability Management at Airports. Supervisor prof. Ing. Dušan Kavický, CSc.
FME	Ing. Jiří Dvořák	Preparation and Properties of Ultra-Fine Aluminium Formed by Intensive Plastic Deformation. Supervisor prof. Ing. Václav Sklenička, DrSc.
FME	Ing. István Szabó	Controlling a Mobile Robot Using Artificial Intelligence Methods. Supervisor doc. Ing. Radek Knoflíček, Dr.
FME	Ing. Ivo Černohous	Study of a Myoelectric Hand Prosthesis. Supervisor doc. Ing. Radek Knoflíček, Dr.
FME	Ing. Martin Vyšín	Hybrid Mobile Robot. Supervisor doc. Ing. Radek Knoflíček, Dr.
FME	Ing. Radim Dundálek	Elastohydrodynamic Models of Bearings as Modules of a Virtual Motor. Supervisor prof. Ing. Václav Píštěk, DrSc.
FME	Ing. Petr Vašík	Connection on Higher Order Principal Prolongations. Supervisor doc. RNDr. Miroslav Doupovec, CSc.
FME	Ing. Petr Tichopádek	Elipsometry of Surfaces and Thin Layers – Developing and Applying a Device. Supervisor prof. RNDr. Tomáš Šikola, CSc.
FME	Ing. Filip Lopour	Development and Application of an UHV SPM Microscope. Supervisor prof. RNDr. Tomáš Šikola, CSc.
FME	Ing. Jiří Omes PC	Model of a Hydraulic Press with Pressure Machine Pulsations. Supervisor doc. Ing. Vladimír Kabát, CSc.
FME	Ing. Lubomír Novotný	Analysis of Processes in Ball Bolts and Nuts. Supervisor doc. Ing. Vladimír Kabát, CSc.

FME	Ing. Radek Dvořák	Research and Development of a Device for Thermal Processing of Gas Waste. Supervisor doc. Ing. Ladislav Bébar, CSc.
FME	Ing. Vojtěch Jebáček	Optimisation of Intelligent CAD System Usage for Design of Process Units. Supervisor prof. Ing. Josef Kohoutek, CSc.
FME	Ing. Markéta Benešová	Goos-Hänchen Phenomenon and Local Characteristics of Photonic Structures. Supervisor prof. RNDr. Pavel Tománek, CSc.
FME	Ing. Jiří Vízdal	Phase Equilibriums in Systems of Led-Free Solders. Supervisor RNDr. Aleš Kroupa, CSc.
FME	Ing. Zbyněk Hrnčíř	Impact of Aerofoil Section on Properties During Frost Forming. Supervisor prof. Ing. Karel Fiľakovský, CSc.
FME	Ing. Petr Král	Influence of Microstructure on the Mechanical Properties of Ultra-Fine Aluminium and the Al-0,2%Sc Alloy after Extreme Plastic Deformation (ECAP). Supervisor prof. Ing. Václav Sklenička, DrSc.
FME	Ing. Vladimír Krejčí	Reinforced Exhaust Systems Investigation. Supervisor doc. Ing. Milan Pavelek, CSc.
FME	Ing. Stanislav Bábor	Mass Spectroscopy of Secondary Ions in Analyzing Surfaces and Thin Layers. Supervisor prof. RNDr. Tomáš Šikola, CSc.
FME	Ing. Radek Branžovský	Safety, Identification, and Analysis of Risks During Operation of Transport Handling Machines Focussing on Passenger Lifts. Supervisor doc. Ing. Břetislav Mynář, CSc.
FME	Ing. Jan Čechal	Analysing Surfaces and Thin Layers Using Photoelectron Spectroscopy. Supervisor prof. RNDr. Petr Dub, CSc.
FME	Ing. Miloš Daniel	Dynamic Load of the Landing Facility of General Aviation Aircraft. Supervisor prof. Ing. Antonín Píštěk, CSc.
FME	Ing. Jan Riedl	Non-Conventional Airfoils of Airplanes. Supervisor prof. Ing. Karol Fiľakovský, CSc.
FME	Ing. Ladislav Jurášek	Impact of Temperature and Load Speed of the Fracture Behaviour of Steels in the Transition Area. Supervisor doc. Ing. Ivo Dlouhý, CSc.
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