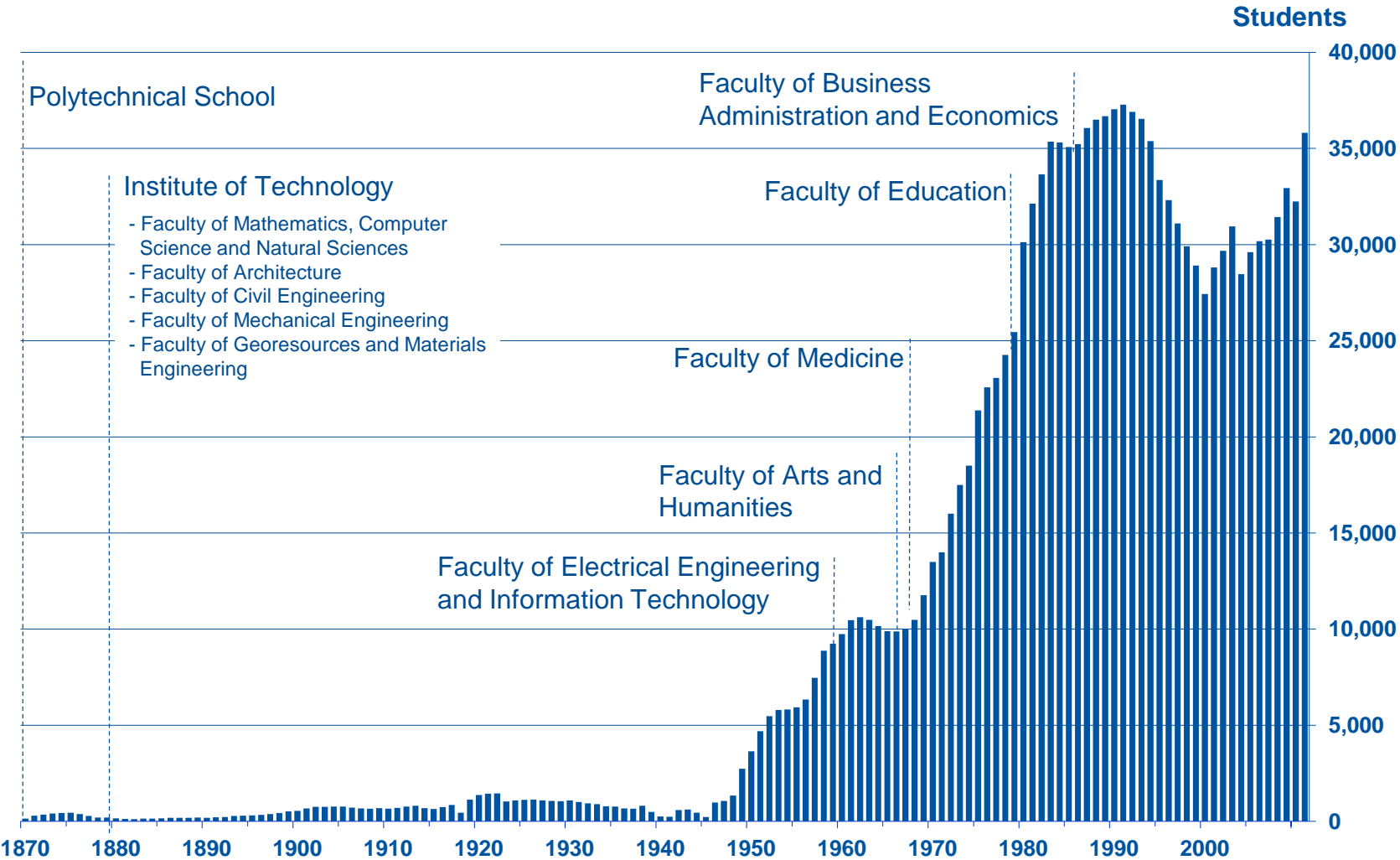
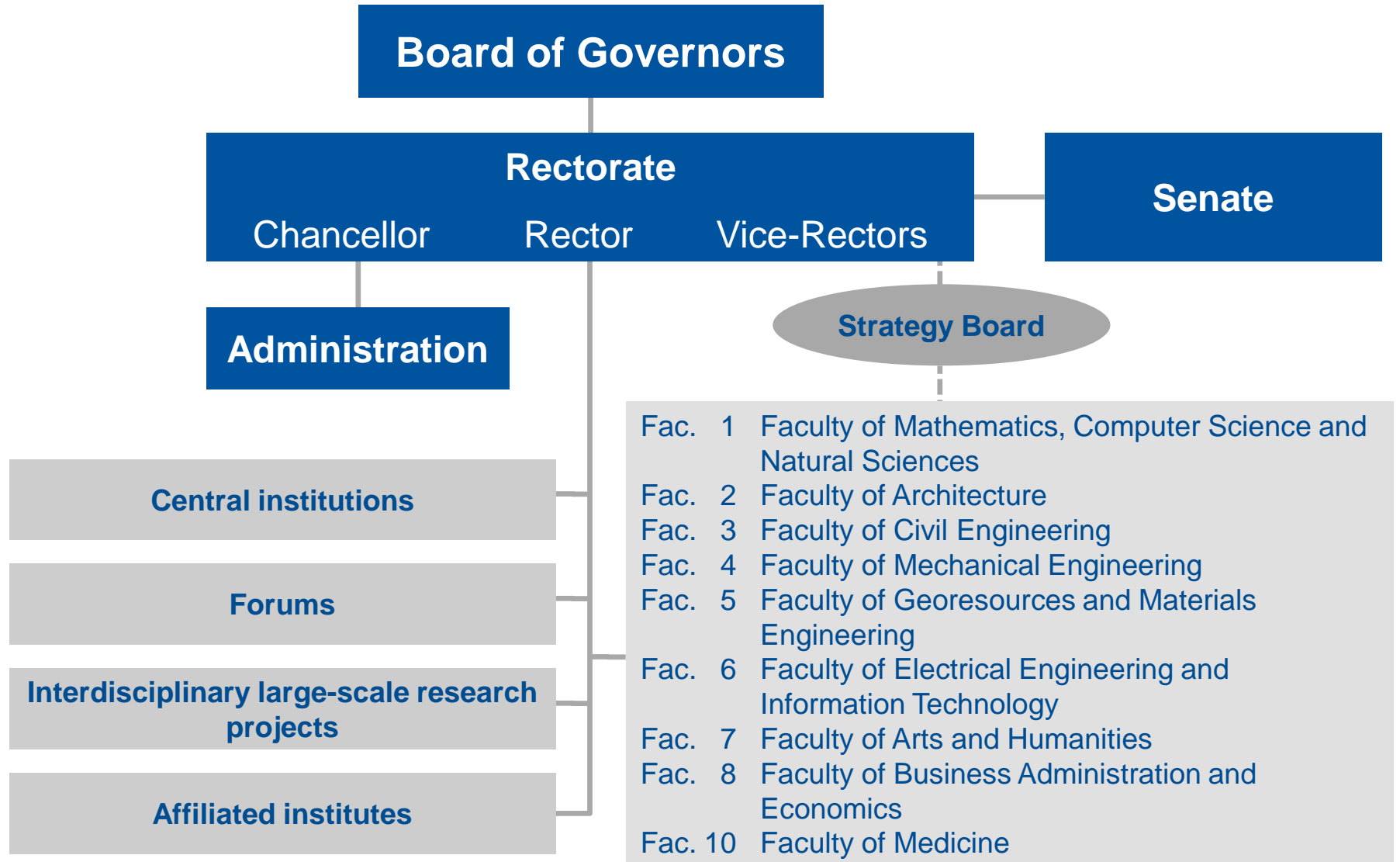


A total of 35,813 students

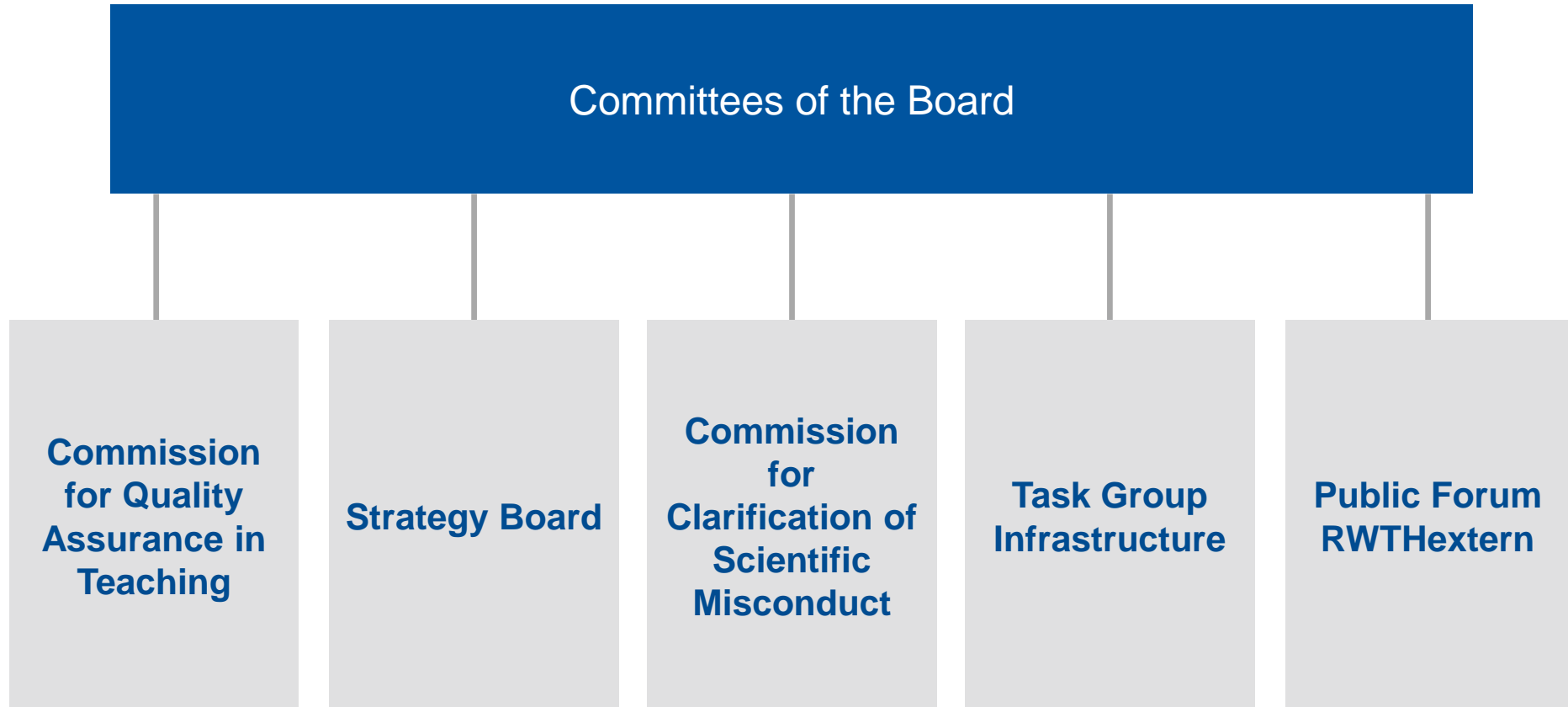
8,183 New enrolments	126 Courses of study: undergraduate and postgraduate studies
5,391 Graduations	
480 Professors (of which 41 Junior Professors)	13 Collaborative Research Centres
4,492 Other academic staff: research assistants, etc. (incl. Staff from third-party funds)	20 Research Training Programmes (of which 12 DFG Research Training Groups)
	Excellence Initiative:
2,346 Non-academic staff (incl. Staff from third-party funds)	1 Graduate School (1st funding line)
	3 Clusters of Excellence (2nd funding line)
	1 Institutional Strategy (3rd funding line)

€748 million Budget

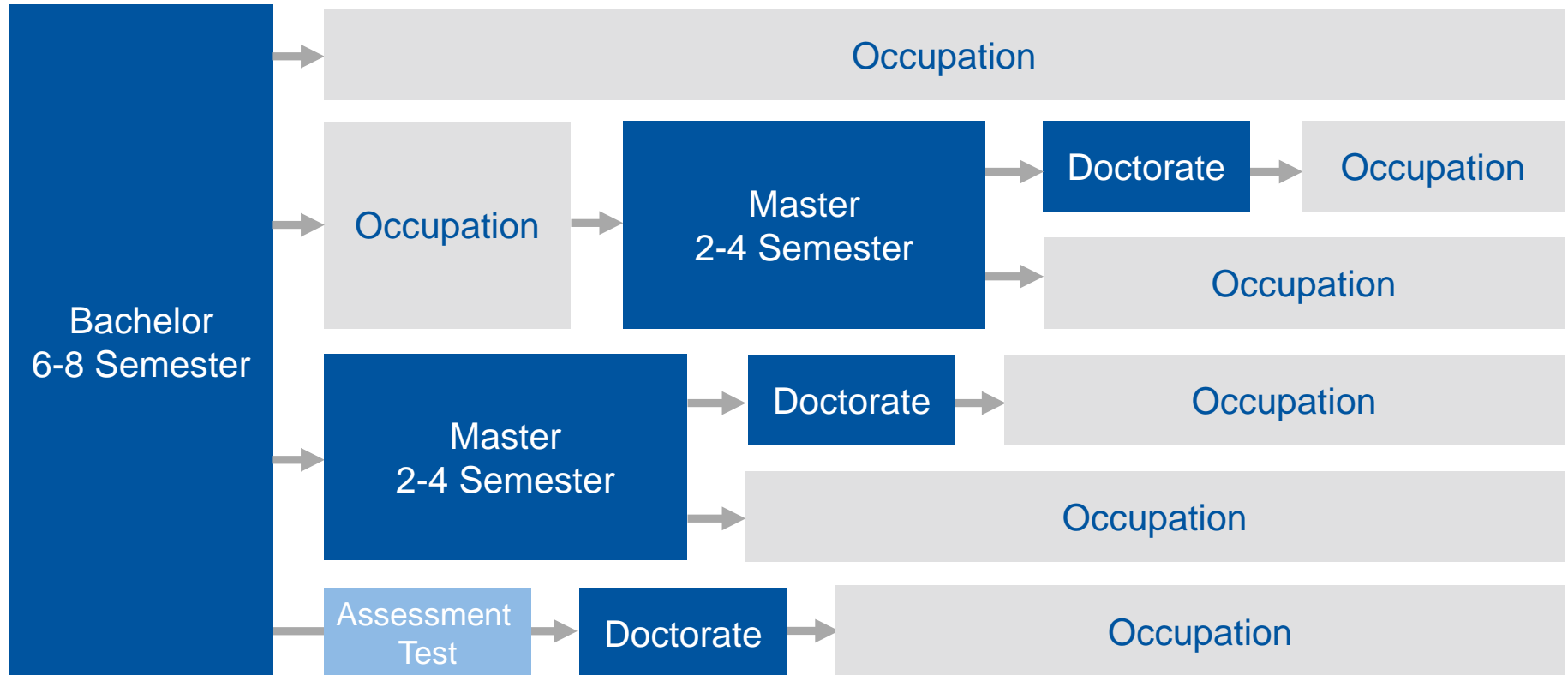




Committees of the Board



Structure of Bachelor and Master's Programmes



➡ The benefit of consecutive courses of study are the various possibilities of education

Degree Programmes

Bachelor and Master (1/3)

Faculty 1

Faculty of Mathematics, Computer
Science and Natural Sciences

Biology (B.Sc./M.Sc.)
Chemistry (B.Sc./M.Sc.)
Computer Science (B.Sc./M.Sc.)
Mathematics (B.Sc./M.Sc.)
Physics (B.Sc./M.Sc.)
Biotechnology / Molecular Biotechnology (B.Sc./M.Sc.)
Software Systems Engineering (M.Sc.)
Media Informatics (M.Sc., B-IT)
Ecotoxicology (M.Sc.)

Faculty 2

Faculty of Architecture

Architecture (B.Sc./M.Sc.)
Urban Planning (M.Sc.)

Faculty 3

Faculty of Civil Engineering

Civil Engineering (B.Sc./M.Sc.)
Business Administration and Engineering: Civil
Engineering (B.Sc./M.Sc.) (Cooperation with Fac. 8)
Mobility and Transport (B.Sc./M.Sc.)
Environmental Engineering (B.Sc./M.Sc.) (Cooperation
with Fac. 5)

Faculty 4

Faculty of Mechanical Engineering

Mechanical Engineering (B.Sc./M.Sc.)
Automation Engineering (M.Sc.)
Computational Engineering Science (B.Sc./M.Sc.)
Business Administration and Engineering: Mechanical
Engineering (B.Sc./M.Sc.) (Cooperation with Fac. 8)
Simulation Sciences (M.Sc.)
Automotive Engineering and Transport (M.Sc.)
Aeronautical Engineering and Astronautics (M.Sc.)
Production Engineering (M.Sc.)
Chemical Engineering (M.Sc.)
Plastics and Textile Technology (M.Sc.)
Energy Engineering (M.Sc.)
Development and Design Engineering (M.Sc.)
Fundamentals of Mechanical Engineering (M.Sc.)

Degree Programmes

Bachelor and Master (2/3)

Faculty 5

Faculty of Georesources and
Materials Engineering

Materials Science (B.Sc./M.Sc.)
Applied Geosciences (B.Sc./M.Sc.)
Georesources Management (B.Sc./M.Sc.)
Mineral Resources Engineering (B.Sc./M.Sc.)
Applied Geography (B.Sc./M.Sc.)
Geography (B.A.) (Cooperation with Fac. 7)
Industrial Engineering – Branch of study Raw
Materials and Materials Technology (B.Sc./M.Sc.)
(Cooperation with Fac. 8)
Waste Management Engineering (B.Sc./M.Sc.)
(Cooperation with Fac. 3)
Materials Engineering (B.Sc./M.Sc.)
Metallurgical Engineering (M.Sc.)
Applied Geophysics (M.Sc. – IDEA League)
Economic Geography (M.Sc.) (Cooperation with Fac. 8)
Nuclear Safety Engineering (M.Sc.)
Sustainable Power Supply (M.Sc.)

Faculty 6

Faculty of Electrical Engineering
and Information Technology

Electrical Engineering, Information Technology and
Computer Engineering (B.Sc./M.Sc.)
Business Administration and Engineering – Electrical
Power Engineering (B.Sc./M.Sc.) (Cooperation with
Fac. 8)

Faculty 7

Faculty of Arts and Humanities

European Studies (MES) (M.A.)
English Studies (B.A./M.A.)
Linguistics and Communication Studies (B.A./M.A.)
German and General Literature (B.A./M.A.)
History (B.A./M.A.)
Philosophy (B.A./M.A.)
Political Science (B.A./M.A.)
Psychology (B.Sc./M.Sc.)
Sociology (B.A./M.A.)
Corporate Education and Cognitive Psychology of
Knowledge (B.A.)
Education and Knowledge Management (M.A.)
Geography (B.A.) (Cooperation with Fac. 5)
Technical Communication (B.Sc./M.Sc.)
(Communication Studies and
- Fundamentals of Computer Science or
- Fundamentals of Mechanical Engineering or
- Fundamentals of Materials Engineering or
- Fundamentals of Electrical Engineering)

Faculty 8

Faculty of Business Administration
and Economics

Business Administration (B.Sc./M.Sc.)
Economics and Economic Studies in History (B.A.)
(Cooperation with Fac. 7)
Economics (M.Sc.)

Faculty 10

Faculty of Medicine

Logopaedics (B.Sc.)
Teaching and Research Logopaedics (M.Sc.)
Biomedical Engineering (M.Sc.)

Degree Programmes

Teaching Degree and Medicine

Faculty 1

Faculty of Mathematics, Computer
Science and Natural Sciences

Biology (B.Sc.)
Chemistry (B.Sc.)
Computer Science (B.Sc.)
Mathematics (B.Sc.)
Physics (B.Sc.)

Faculty 3

Faculty of Civil Engineering

Structural Engineering (B.Sc.)
Timber Processing Technology (B.Sc.)
Wood Engineering (B.Sc.)
Underground Engineering (B.Sc.)

Faculty 4

Faculty of Mechanical Engineering

Vehicle Engineering (B.Sc.)
Production Engineering (B.Sc.)
Mechanical Engineering Technology (B.Sc.)
Textile and Clothing Technology (B.Sc.)
Supply Engineering (B.Sc.)

Faculty 6

Faculty of Electrical Engineering
and Information Technology

Electrical Engineering (B.Sc.)
Energy Management (B.Sc.)
Communications Engineering (B.Sc.)
Technical Computer Science (B.Sc.)

Faculty 7

Faculty of Arts and Humanities

German (B.A.)
English (B.A.)
French (B.A.)
History (B.A.)
Catholic Religion (B.A.)
Politics (B.A.) (only in combination with Economics)
Spanish (B.A.)

Faculty 8

Faculty of Business Administration
and Economics

Economics (B.Sc.)
Economics / Politics (B.Sc.)

Faculty 10

Faculty of Medicine

Medicine Model Degree Programme (State
Examination)
Dentistry (State Examination)

Full-time Master's Degree Programmes

Computer Aided Conception and Production in Mechanical Engineering (M.Sc.)

Production Systems Engineering (M.Sc.)

Part-time Master's Degree Programmes

Laser in Dentistry (M.Sc.)

Executive MBA for Technology Managers

Programmes in Master in Redevelopment

Application

- Allocation of €22 million [€500 per semester]
 - over 50 % used for staff expenses
 - over 40 % for improvement of the university's infrastructure

Exemplary Measures

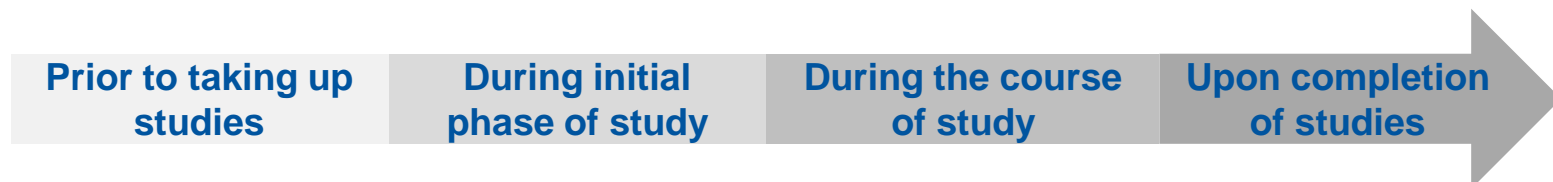
- Improvement of support (small groups, tutorials, practical training, ...)
- Improvement of advisory services (mentoring, advanced individual advice, ...)
- Training courses for tutors
- Extending opening hours of learning rooms , CIP-Pools, library, ...
- Creation of new learning rooms
- IT measures (development of W-LAN, e-learning-platforms, modul-IT, ...)
- Building measures (lecture halls, ...)

Quality Goals in Learning and Teaching

- Increase of student satisfaction
- Intensive and comprehensive tutoring of students
- Reduction of learning impediments
- Shortening of the duration of study
- Increase of pass rates and graduation rates
- Provision of professional qualifications and core qualifications
- Alignment of teaching contents with the latest research results
- Development of teaching and its practical application
- Wide range of taught subjects
- Attraction and retention of outstanding teachers and researchers
- Regular and detailed review of the teaching and teaching methods in practice

Quality Assurance in Learning and Teaching

Instruments of Quality Assurance			
Unihits for Kids	Preparatory courses	Evaluation of learning and teaching	Graduate surveys
Science nights	Introductory events	Student course evaluation	Alumni activities
Open University Day	Tutor programmes	Workload survey (StOEhn)	Informational events and workshops
Studying before <i>Abitur</i>	Mentoring system	(Subject-specific) Student advice	Career Center Activities
Study information days	Exercises in small groups	Mentoring system	
Study advisory days		Exercises in small groups	
Self-assessment		E-Learning	



Graduate School

Aachen Institute of Advanced Study in Computational Engineering Science (AICES)

Cluster of Excellence

Ultra High-Speed Mobile Information and Communication (UMIC)

Integrative Production Technology for High-wage Countries

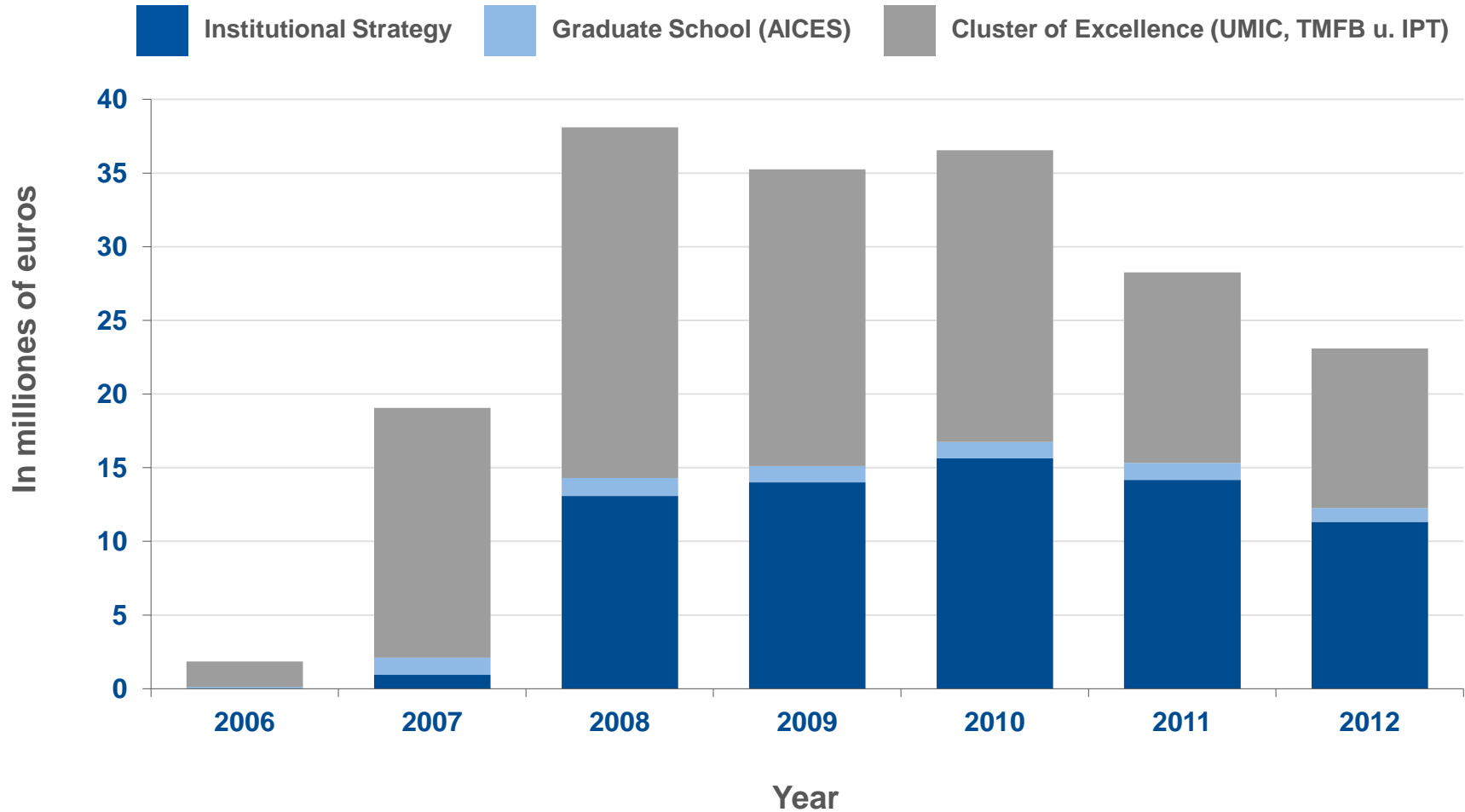
Tailor-made Fuels from Biomass (TMFB)



Institutional Strategy

RWTH 2020 – Meeting Global Challenges
The Integrated Interdisciplinary University of Technology

Excellence Initiative at RWTH Aachen University – Total Volume of Funding (Granted Funds)



Interdisciplinary Forums

Rectorate Commissioner of the Interdisciplinary Forums

Univ.-Prof. Dr.-Ing. Dipl.-Wirt.Ing. Th. Gries

Forum Information Technology

Spokesperson: Univ.-Prof. Dr.rer.nat. B. Rumpe
Chair of Computer Science 3
Referee: Navina von Felbert, M.A.

Forum Life Sciences

Spokesperson: Univ.-Prof. Dr.rer.nat. M. Möller
Chair of Textile Chemistry and Macromolecular Chemistry
Referee: Navina von Felbert, M.A.

Forum Materials Science and Engineering Technology

Spokesperson: Univ.-Prof. Dr.-Ing. D. G. Senk
Steel Department
Referee: Petra Kraus, M.A.

Forum Mobility and Transport

Spokesperson: Univ.-Prof. Dr.-Ing. D. Abel
Institute for Control Engineering
Referee: Vanessa Mai, M.A.

Forum Technology and Society

Spokesperson: Univ.-Prof. Dr. phil. A. Heinen
Institute for History
Referee: Vanessa Mai, M.A.

Forum Environmental Science

Spokesperson: Univ.-Prof. Dr.-Ing. P. Doetsch
Department of Waste Management
Referee: Petra Kraus, M.A.

DFG Collaborative Research Centres

DFG Collaborative Research Centres

- SFB-TR 9 Computational Particle Physics**
Spokesperson: Univ.-Prof. Dr. rer.nat. M. Beneke, Institute for Theoretical Particle Physics and Cosmology
- SFB-TR 57 Organ Fibrosis: From Mechanisms of Injury to Modulation of Disease**
Spokesperson: Univ.-Prof. Dr. C. Trautwein, Internal Medicine III
- SFB 532 Textile-Reinforced Concrete – Development of a new technology**
Spokesperson: Univ.-Prof. Dr.-Ing. J. Hegger, Chair and Institute of Structural Concrete
- SFB 542 Molecular Mechanisms of cytokine-mediated Inflammatory Processes**
Spokesperson: Univ.-Prof. Dr. med. J. Flöge, Internal Medicine II
- SFB 686 Model based control of homogenized low-temperature combustion**
Spokesperson: Univ.-Prof. Dr.-Ing. Dr.h.c. Dr.-Ing. E.h. N. Peters, Institute for Combustion Technology
- SFB 761 Steel - ab initio: Designing Novel Ferric Materials Using Quantum Mechanics**
Spokesperson: Univ.-Prof. Dr.-Ing. W. Bleck, Department of Ferrous Metallurgy
- SFB 917 Resistively Switching Chalcogenides for Future Electronics: Structure, Kinetics, and Device Scalability - Nanoswitches**
Spokesperson: Univ.-Prof. Dr.rer.nat. M. Wuttig, I. Institute of Physics

Transregional Collaborative Research Centres

- SFB-TR 4** **Process Chains for the Replication of Complex Optical Elements**
(Speaker University Bremen) Deputy spokesperson: Univ.-Prof. Dr.-Ing. F. Klocke, Laboratory for Machine Tools and Production Engineering, RWTH Aachen
- SFB-TR 32** **Patterns in Soil-Vegetation-Atmosphere Systems: monitoring, modelling and data assembling**
(Speaker University Bonn) Deputy spokesperson: Univ.-Prof. Dr. rer. nat. C. Clauser, Applied Geophysics and Geothermal Energy, RWTH Aachen
- SFB-TR 37** **Micro- and Nanosystems in Medicine - Reconstruction of biological functions**
(Speaker University Hannover) Deputy spokesperson: Univ.-Prof. Dr.-Ing. M. Möller, Chair of Textile Chemistry and Macromolecular Chemistry, RWTH Aachen
- SFB-TR 40** **Technological foundations for the design of thermally and mechanically highly loaded components of future space transportation systems**
(Speaker University München) Deputy spokesperson: Univ.-Prof. Dr.-Ing. W. Schröder, Institute of Aerodynamics, RWTH Aachen
- SFB-TR 87** **Pulsed high power plasmas for the synthesis of nanostructural functional layers**
(Speaker University Bochum) Deputy spokesperson: Univ.-Prof. Dr.-Ing. K. Bobzin, Surface Engineering Institute, RWTH Aachen
- SFB-TR 96** **Thermo-energetic design of machine tools - A systemic approach to solve the conflict between power efficiency, accuracy and productivity demonstrated at the example of machining production**
(Speaker University Dresden) Deputy spokesperson: Univ.-Prof. Dr.-Ing. Chr. Brecher, Laboratory for Machine Tools and Production Engineering, RWTH Aachen

DFG Transfer Units

SFB-TFB 401 Flow Modulation and Fluid-Structure Interaction at Airplane Wings

Spokesperson: Univ.-Prof. Dr.-Ing. W. Schröder, Institute of Aerodynamics

SFB-TFB 440 Assembly of Hybrid Microsystems – Handling and Joining Technologies for small and medium-scale Series Production

Spokesperson: Univ.-Prof. Dr.-Ing. W. Michaeli, Institute of Plastics Processing

SFB-TFB 442 Environmentally friendly Tribosystems by suitable Coatings and Fluids with respect to the Machine Tool

Spokesperson: Univ.-Prof. Dr.-Ing. H. Murrenhoff, Institute for Fluid Power Drives and Controls

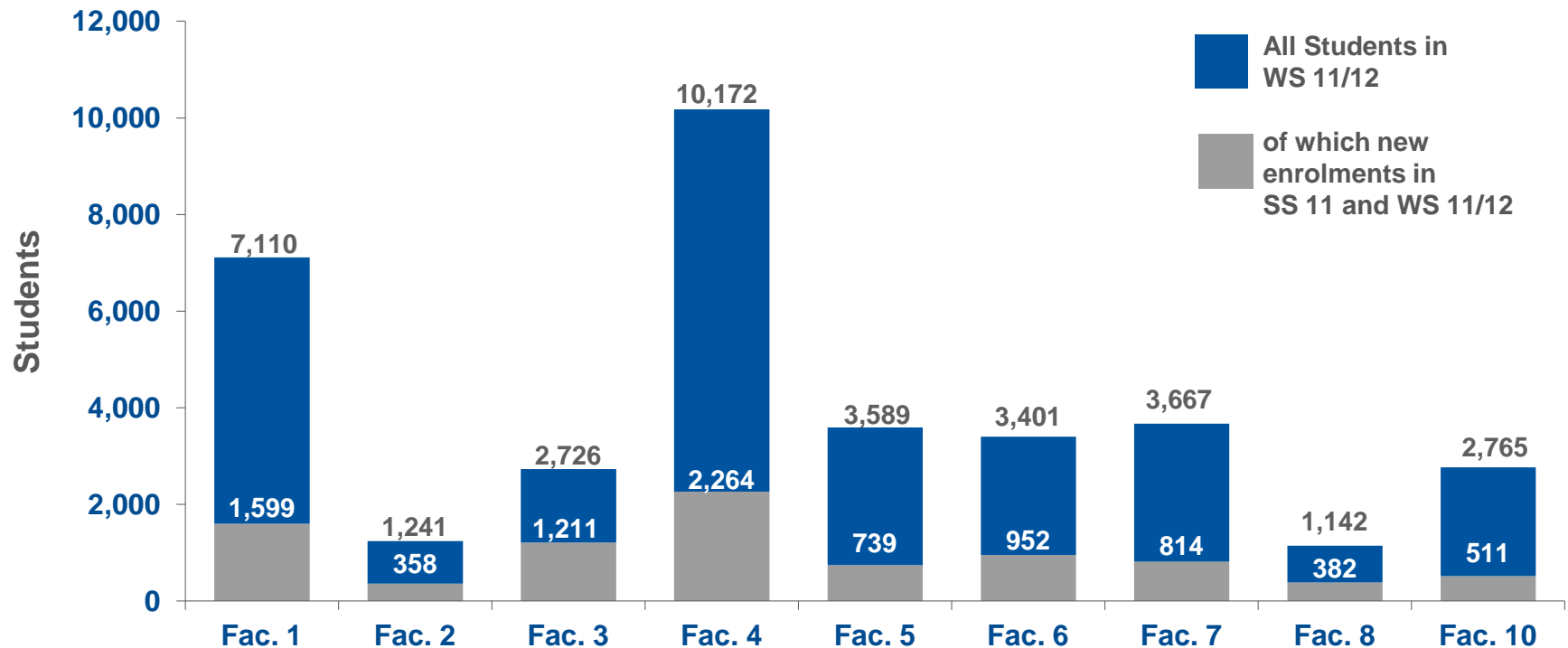
Research Training Groups

- GRK 1035/2 Biointerfaces - Detection and Control of Boundary-Induced Biomolecular and Cellular Functions**
 Spokesperson: Univ.-Prof. Dr.rer.nat. M. Möller, Managing Director of DWI and Chair of Textile Chemistry
 Macromolecular Chemistry
- GRK 1166/2 BioNoCo - Biocatalysis Using Non-Conventional Media**
 Spokesperson: Univ.-Prof. Dr.-Ing. J. Büchs, Chair of Biochemical Engineering
- GRK 1298/1 AlgoSyn - Algorithmic Synthesis of Reactive and Discrete-Continuous Systems**
 Spokesperson: Univ.-Prof. Dr. rer.nat. W. Thomas, Chair of Computer Science 7
- GRK 1491/1 Production Ramp-Up Management**
 Spokesperson: Univ.-Prof. Dr.-Ing. Robert Schmitt, Chair of Metrology and Quality Management at the Laboratory
 for Machine Tools and Production Engineering (WZL)
- GRK 1632/1 Experimental and Constructive Algebra**
 Spokesperson: Univ.-Prof. Dr. Gabriele Nebe, Research and Teaching Area Mathematics (Algebra)
- GRK in Steel - ab initio: Designing Novel Ferric Materials Using Quantum Mechanics**
 SFB 761 Spokesperson: Univ.-Prof. Dr.-Ing. W. Bleck, Department of Ferrous Metallurgy
- GRK in "Nanoswitches" - Resistively Switching Chalcogenides for Future Electronics - Structure, Kinetics, and Device**
 SFB 917 Scalability
 Spokesperson: Univ.-Prof. Dr.rer.nat. M. Wuttig, I.Institute of Physics

International Research Training Groups / Participation in Research Training Groups

- IRTG 1328/2 Brain-behavior relationship of normal and disturbed emotions in schizophrenia and autism**
Spokesperson: Univ.-Prof. Dr. med. Dr. rer.soc. F. Schneider, Clinic for Psychosomatic and Psychotherapeutic Medicine
- IRTG 1508/1 Arterial Remodelling**
Spokesperson: Univ.-Prof. Dr. rer.nat. J. Bernhagen, Institute of Biochemistry and Molecular Cell Biology
- IRTG 1628/1 Selectivity in Chemo- and Biocatalysis**
Spokesperson: Univ.-Prof. Dr.rer.nat. J. Okuda, Chair of Organometallic Chemistry and Institute of Inorganic Chemistry
- GRK 1095/2 Aero-Thermodynamic Design of a Scramjet Propulsion System for Future Space Transportation Systems (Contributing Member)**
Coordinator: Univ.-Prof. Dr.-Ing. Wolfgang Schröder, Chair of Fluid Mechanics and Institute of Aerodynamics
- GRK 1572/1 Bionics - Interactions Across Boundaries to the Environment (Contributing Member)**
Coordinator: Univ.-Prof. Dr.techn. W. Baumgartner, Institute of Biology II, Unit of Cellular Neurobionics

Students by Faculty



Fac. 1: Faculty of Mathematics, Computer Science and Natural Sciences

Fac. 2: Faculty of Architecture

Fac. 3: Faculty of Civil Engineering

Fac. 4: Faculty of Mechanical Engineering

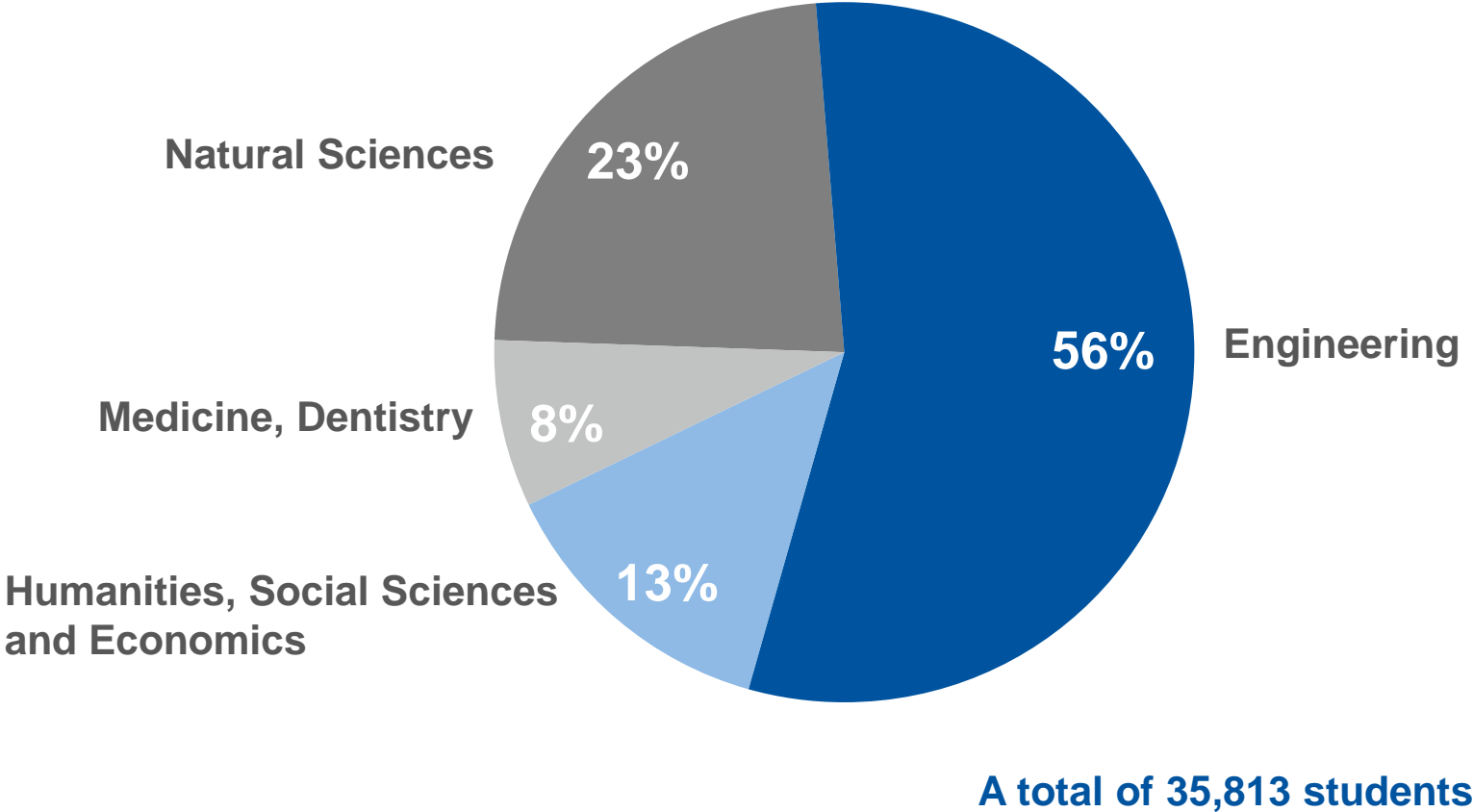
Fac. 5: Faculty of Georesources and Materials Engineering

Fac. 6: Faculty of Electrical Engineering and Information Technology

Fac. 7: Faculty of Arts and Humanities

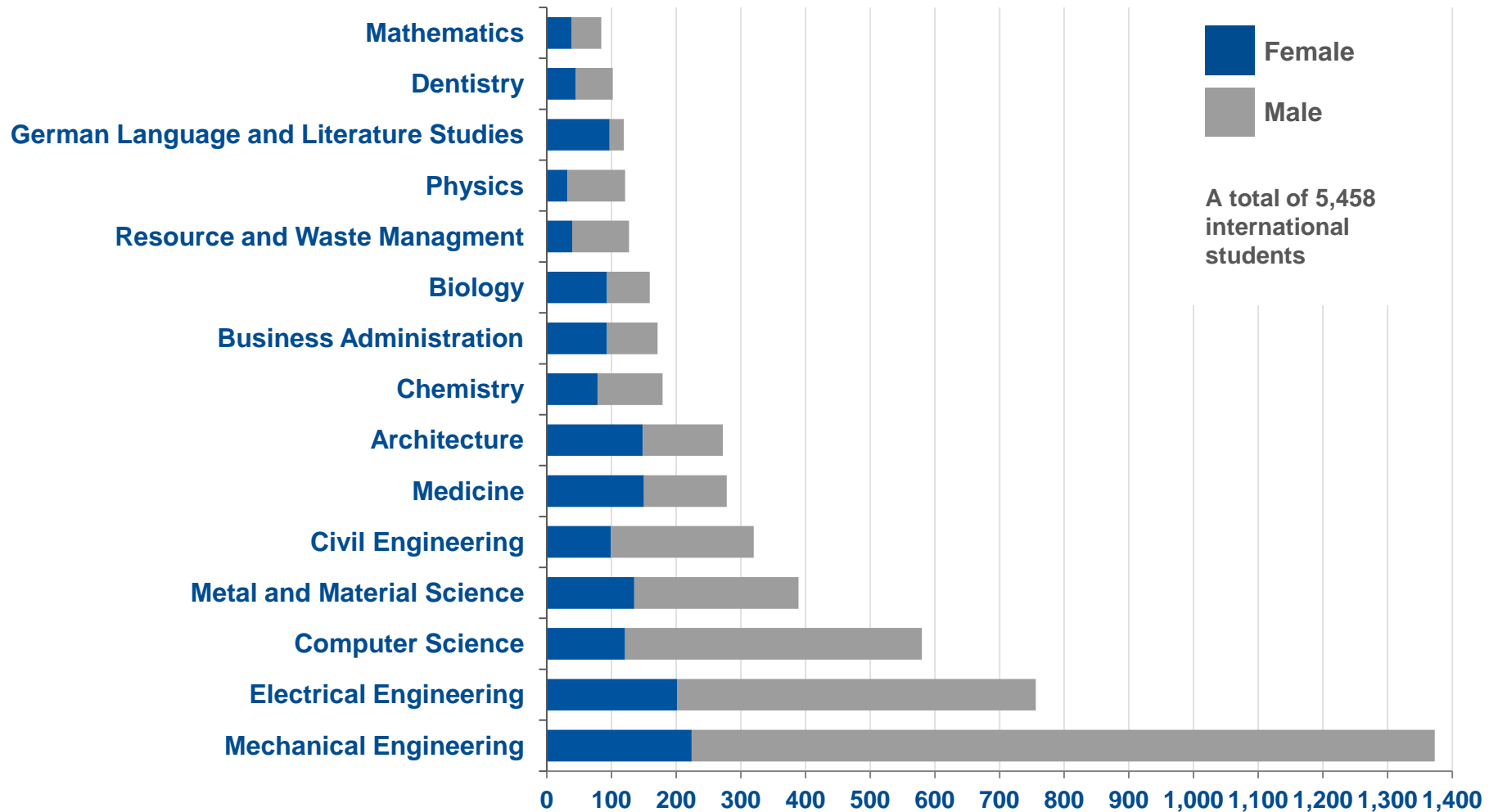
Fac. 8: Faculty of Business Administration and Economics

Fac. 10: Faculty of Medicine



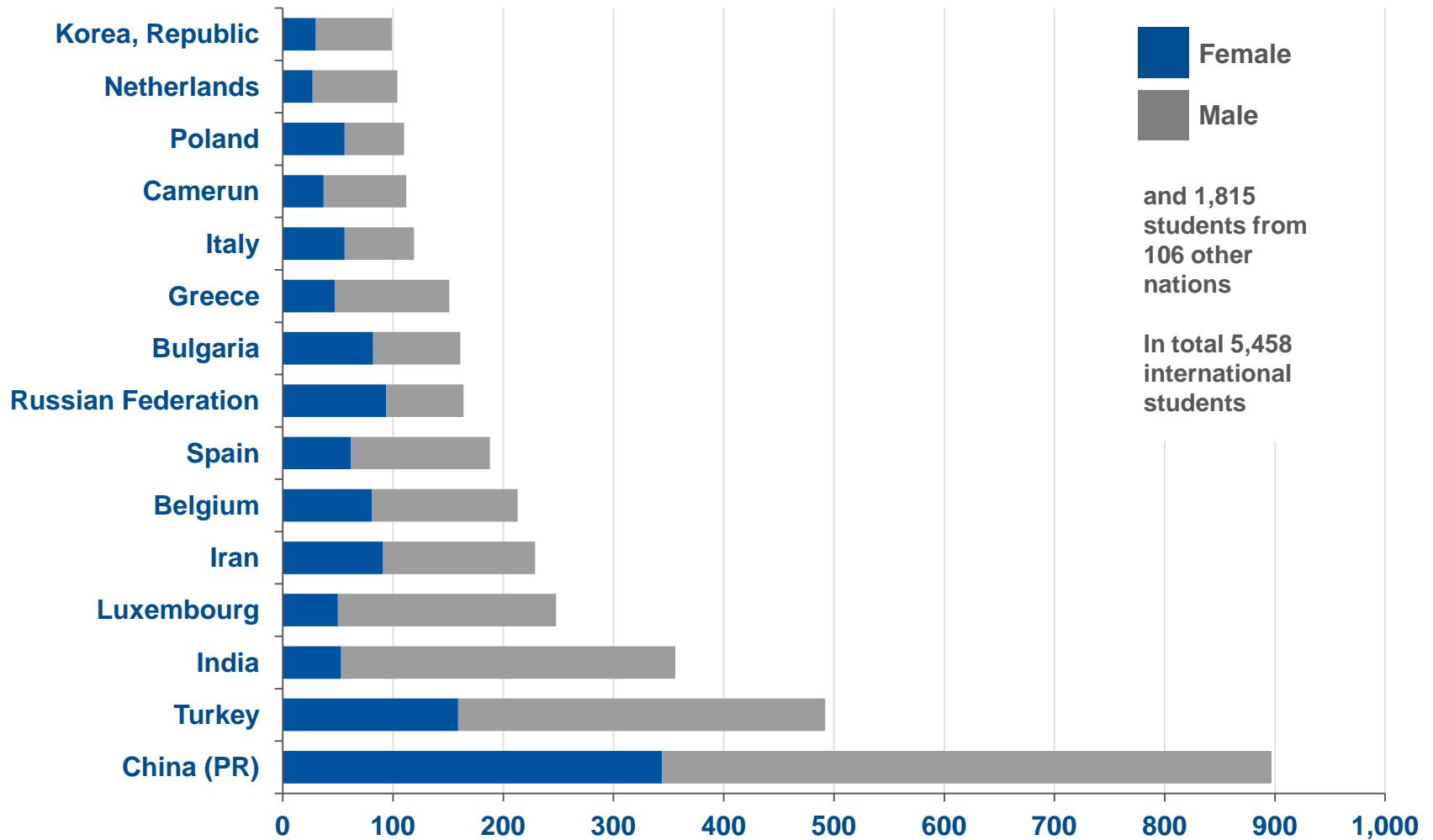
International Students WS 11/12

Top 15 Subjects

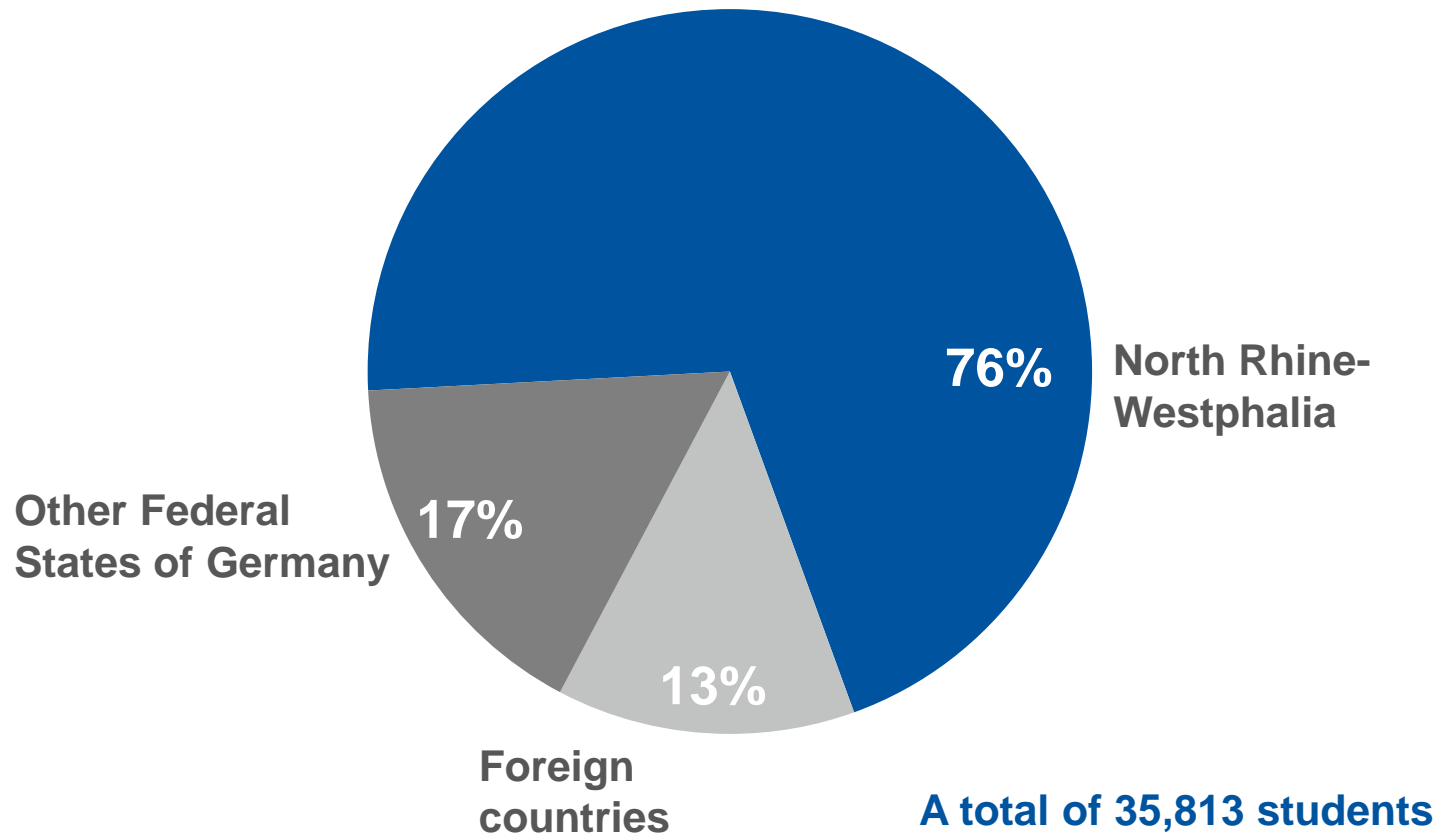


International Students WS 11/12

Top 15 Countries

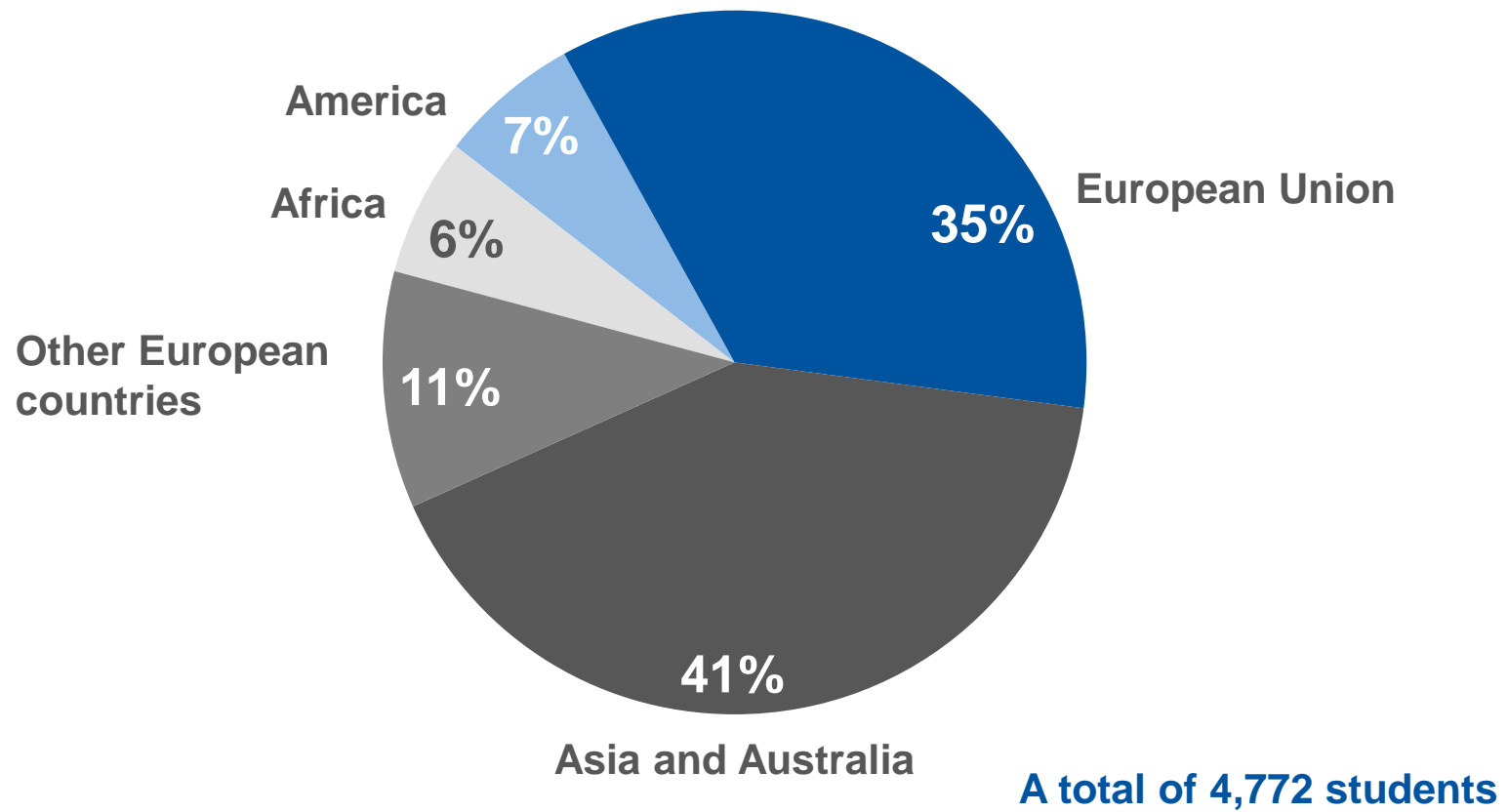


Distribution according to North Rhine-Westphalia, other Federal States of Germany and foreign countries



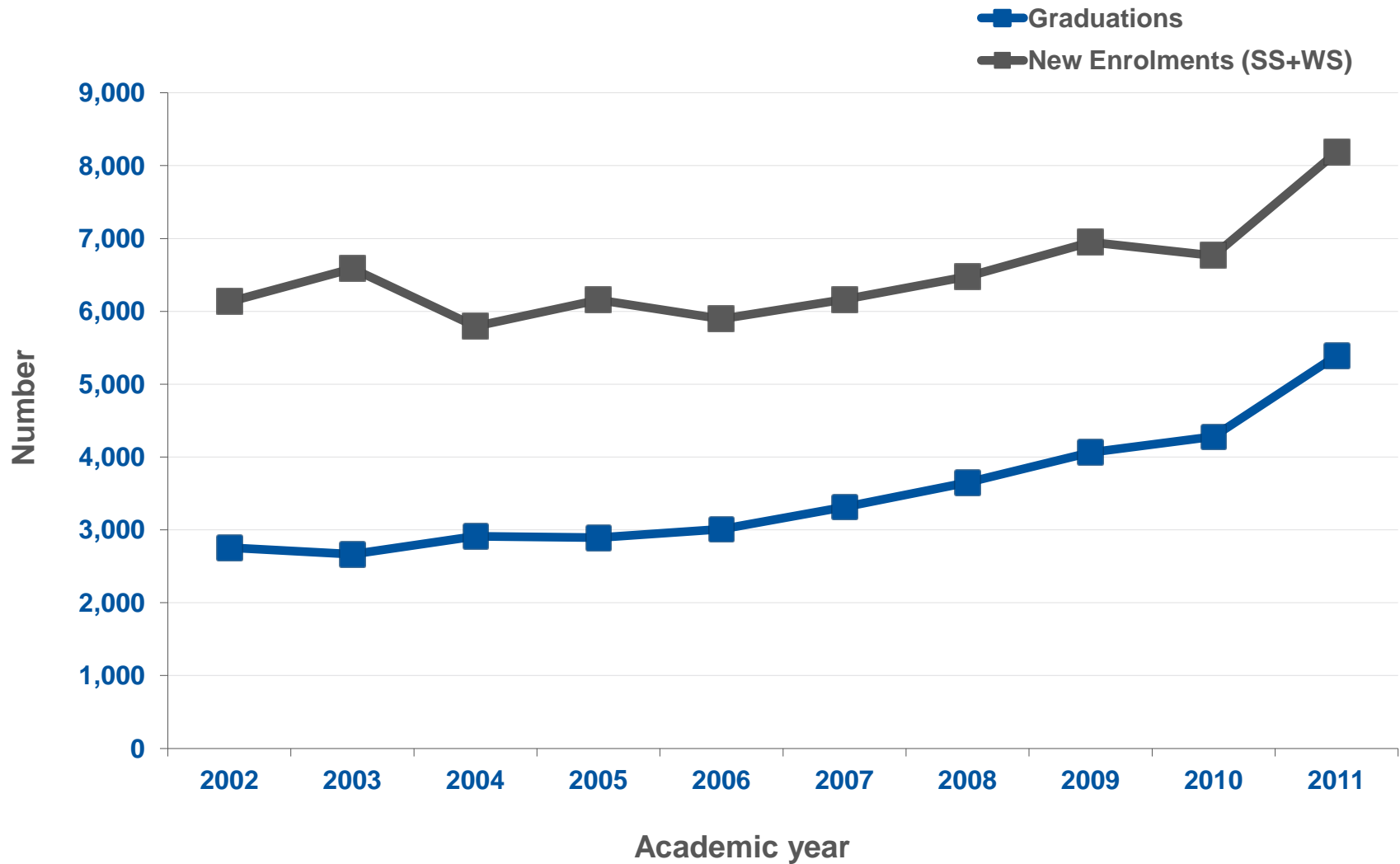
Catchment Area of Students WS 11/12

Distribution according to foreign countries* divided in European Union, other European countries, Asia and Australia, Africa and America

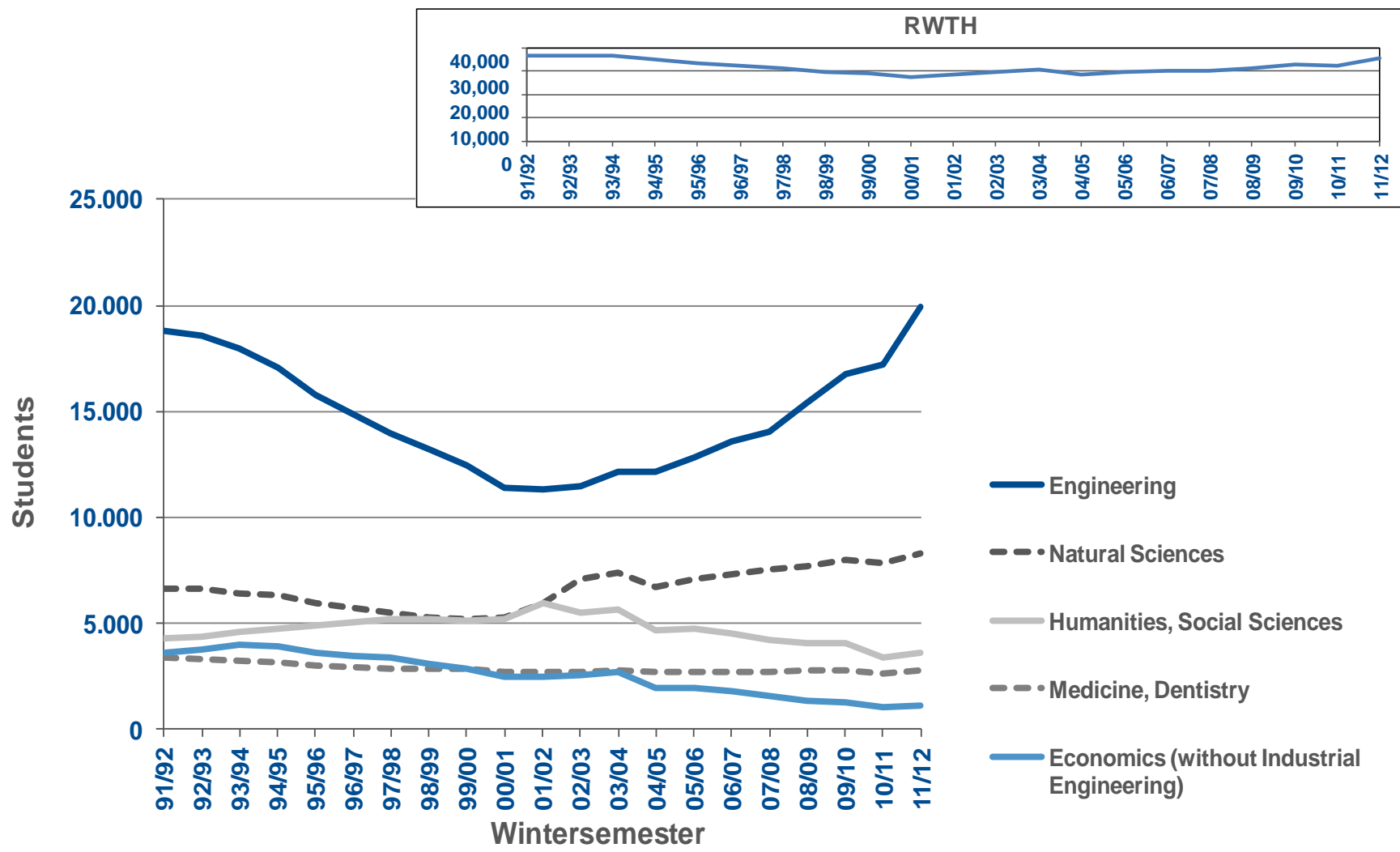


*Here: Country of university entrance qualification, not nationality

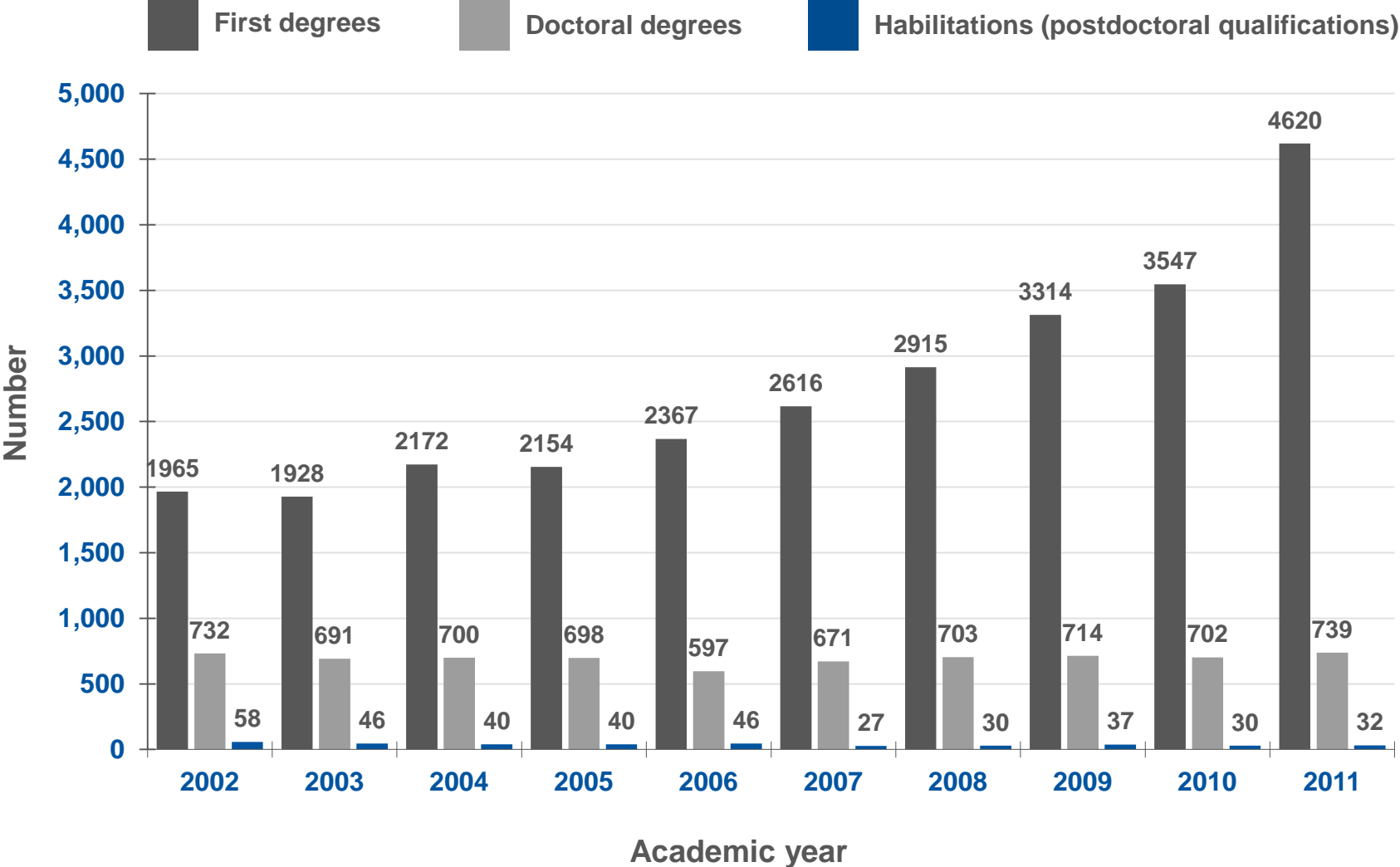
Development of Graduations and new Enrolments



Development of the Number of Students



Degrees Awarded



Full-time Staff 2011

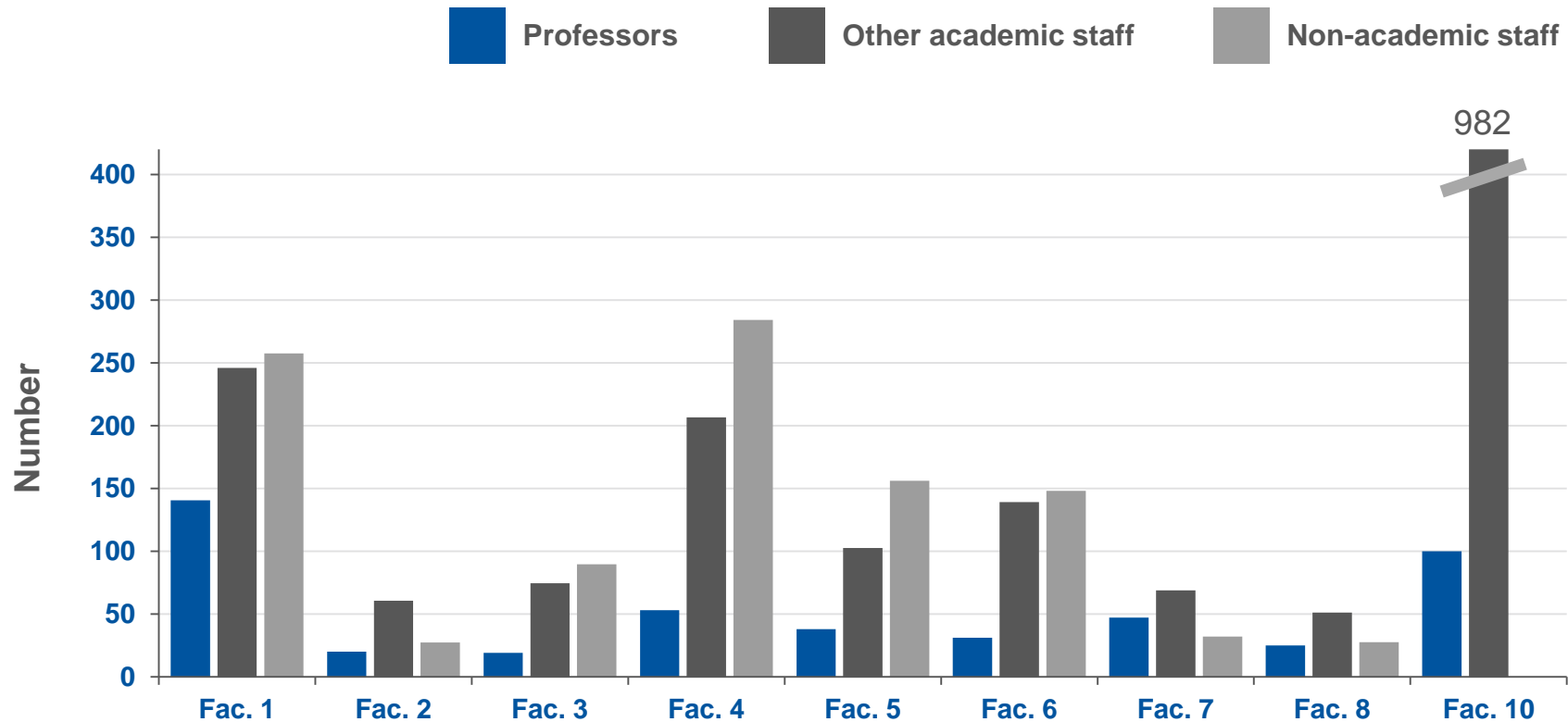
Staff	University without Faculty of Medicine			Faculty of Medicine			University		
	Total	of which women	internat.	Total	of which women	internat.	Total	of which women	internat.
Professors**	392	51	59	90	13	7	482	64	66
Other academic staff	1,049	242	178	982	372	108	2,031	614	286
Academic staff total	1,441	293	237	1,072	385	115	2,513	678	352
Non-academic staff	1,853	787	105	-*	-*	-*	1,853	787	105
Academic and non-academic staff total	3,294	1,080	342	1,072	385	115	4,366	1,465	457
Trainees and interns	718	155	42	-*	-*	-*	718	155	42
Staff from third-party funds	2,710	681	453	244	128	42	2,954	809	495
Staff from tuition fees	119	56	12	28	17	2	147	73	14
Grand total staff (annual full-time equivalent)	6,841	1,972	849	1,344	530	159	8,185	2,502	1,008
Students / Research assistants (grants, third-party funds, tuition fees) (19 hours equivalent***)	2,312	600	319	287	165	27	2,599	765	346

* Employees, trainees and interns of the Universitätsklinikum Aachen are not staff of the university

** incl. Professors financed with third-party funds

*** Students / Research assistants (19 hours equivalent), all others annual full-time equivalent

Professors, other Academic Staff and Non-academic Staff 2011



Fac. 1: Faculty of Mathematics, Computer Science and Natural Sciences

Fac. 2: Faculty of Architecture

Fac. 3: Faculty of Civil Engineering

Fac. 4: Faculty of Mechanical Engineering

Fac. 5: Faculty of Georesources and Materials Engineering

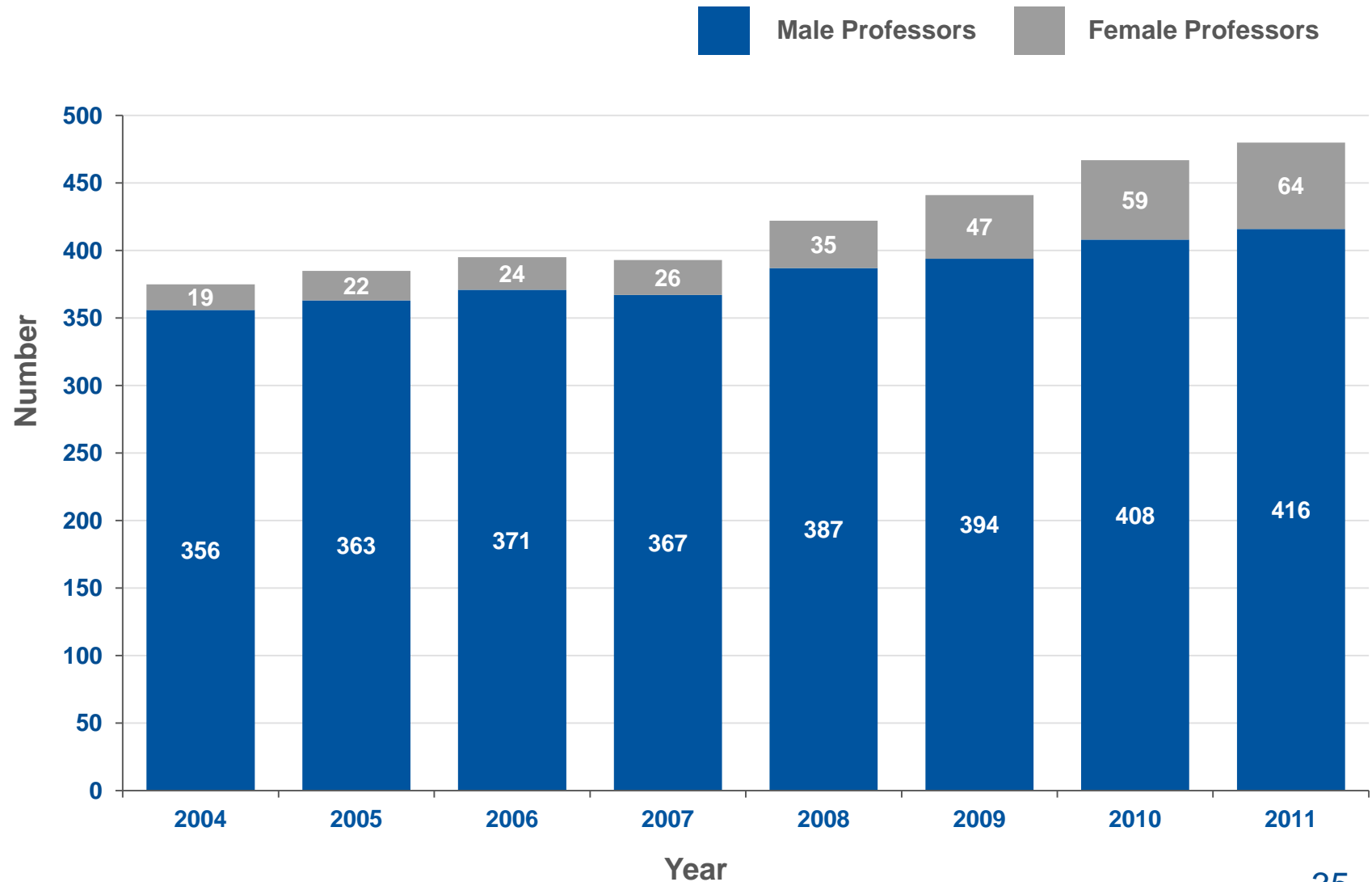
Fac. 6: Faculty of Electrical Engineering and Information Technology

Fac. 7: Faculty of Arts and Humanities

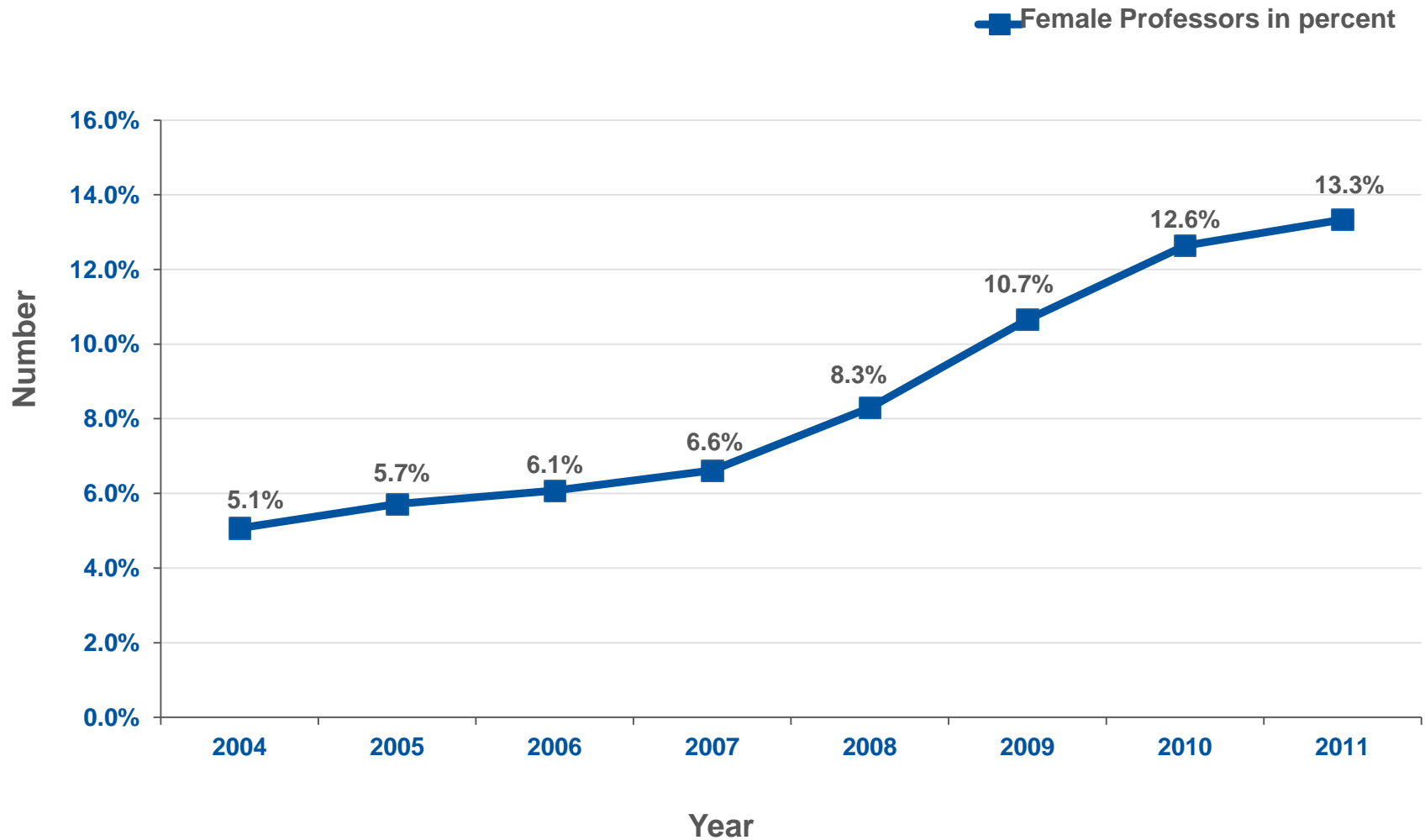
Fac. 8: Faculty of Business Administration and Economics

Fac. 10: Faculty of Medicine

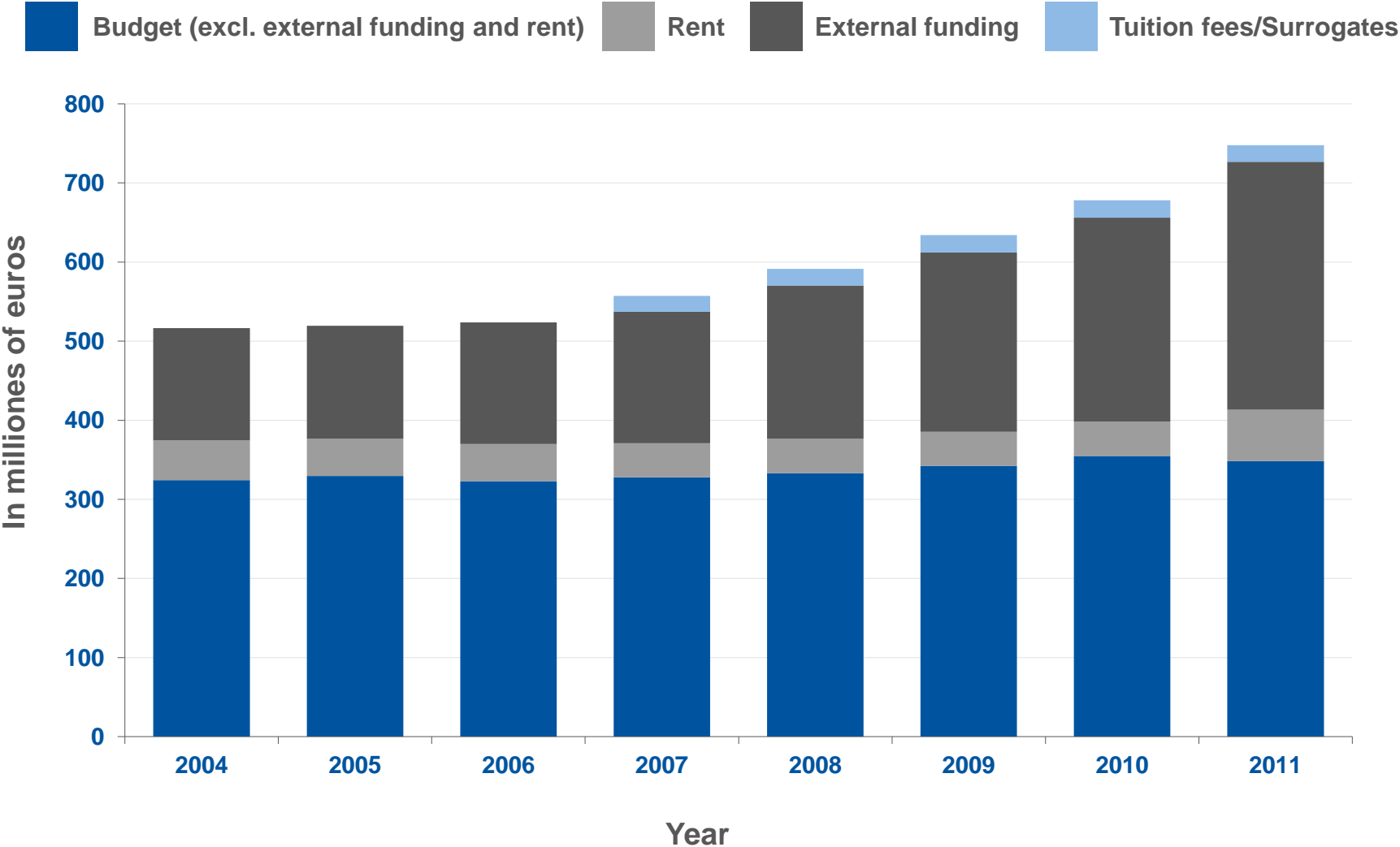
Development of the Number of Professors (incl. Junior Professors)



Development of the Number of female Professors

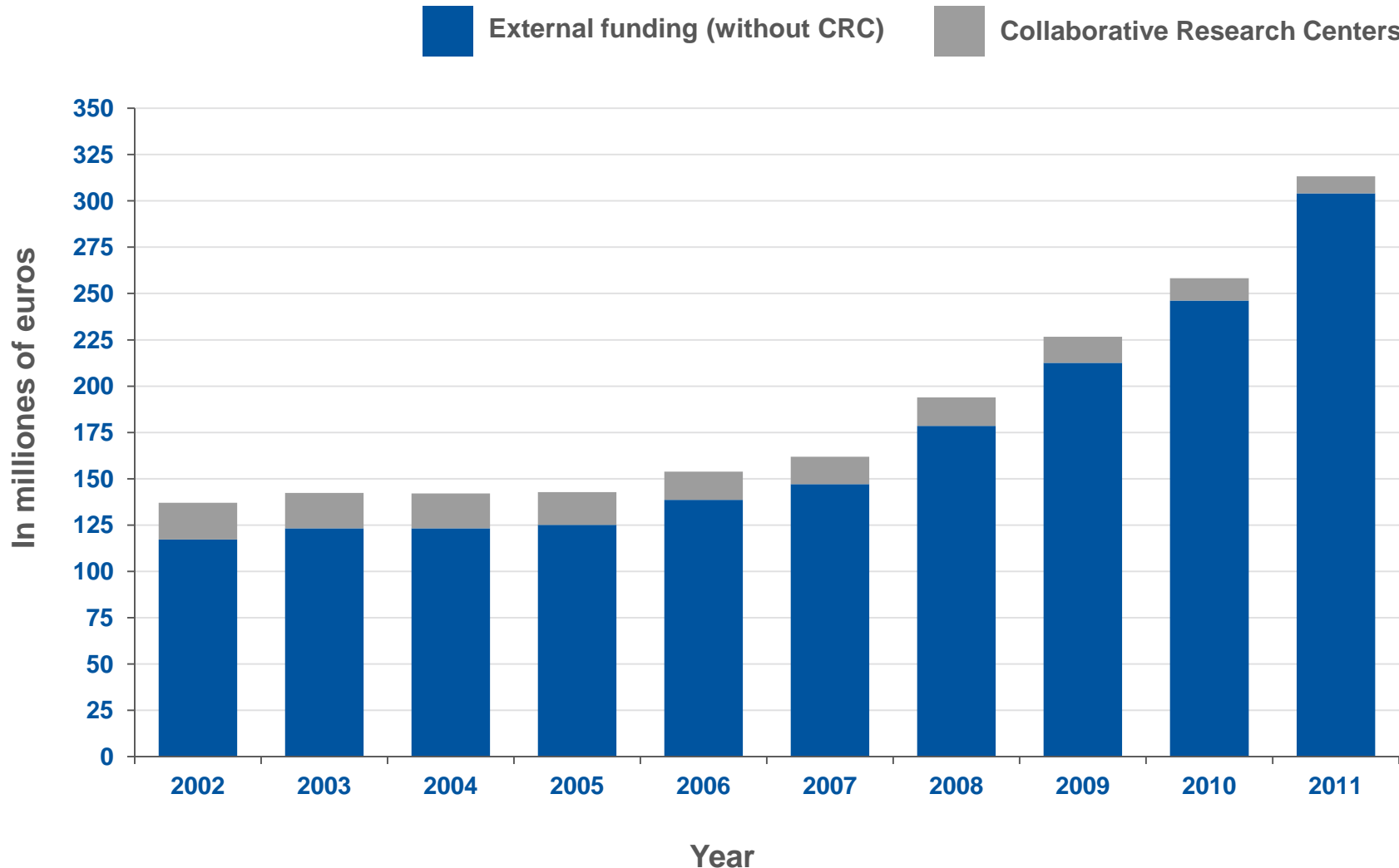


Development of the Faculties' Budget

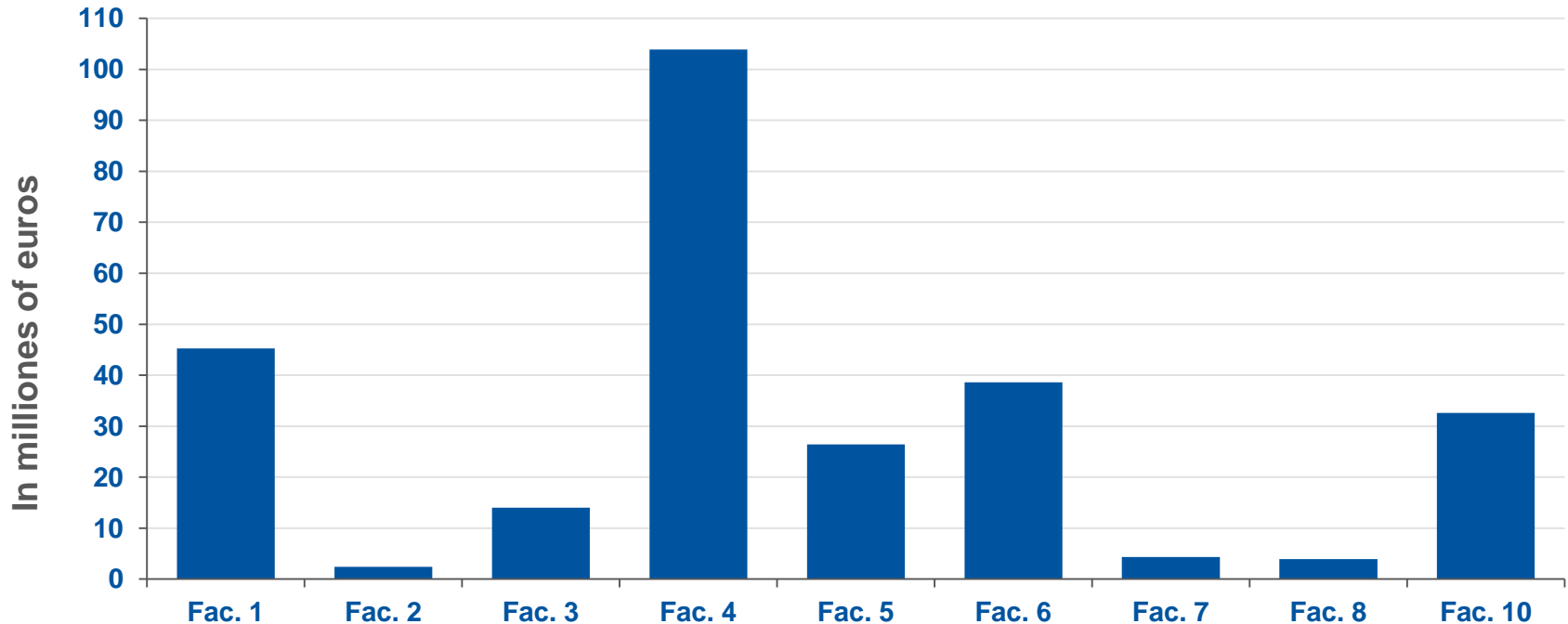


Note: Budget incl. Medicine without Affiliates Institutes

Development of External Funding



External Funding by Faculties 2011



Fac. 1: Faculty of Mathematics, Computer Science and Natural Sciences

Fac. 2: Faculty of Architecture

Fac. 3: Faculty of Civil Engineering

Fac. 4: Faculty of Mechanical Engineering

Fac. 5: Faculty of Georesources and Materials Engineering

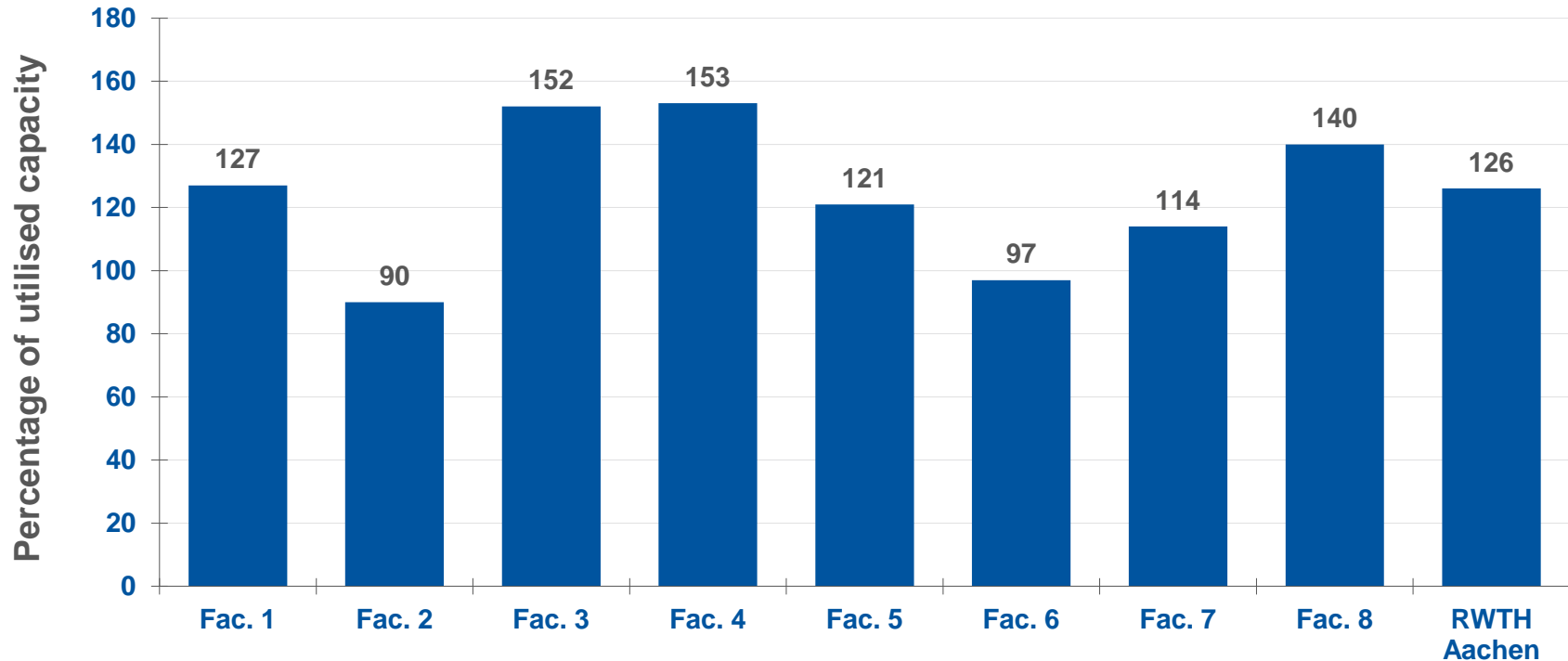
Fac. 6: Faculty of Electrical Engineering and Information Technology

Fac. 7: Faculty of Arts and Humanities

Fac. 8: Faculty of Business Administration and Economics

Fac. 10: Faculty of Medicine

Utilised Capacity of Faculties and the Entire University (without Medicine) WS 11/12



Fac. 1: Faculty of Mathematics, Computer Science and Natural Sciences

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Fac. 4: Faculty of Mechanical Engineering

Fac. 5: Faculty of Georesources and Materials Engineering

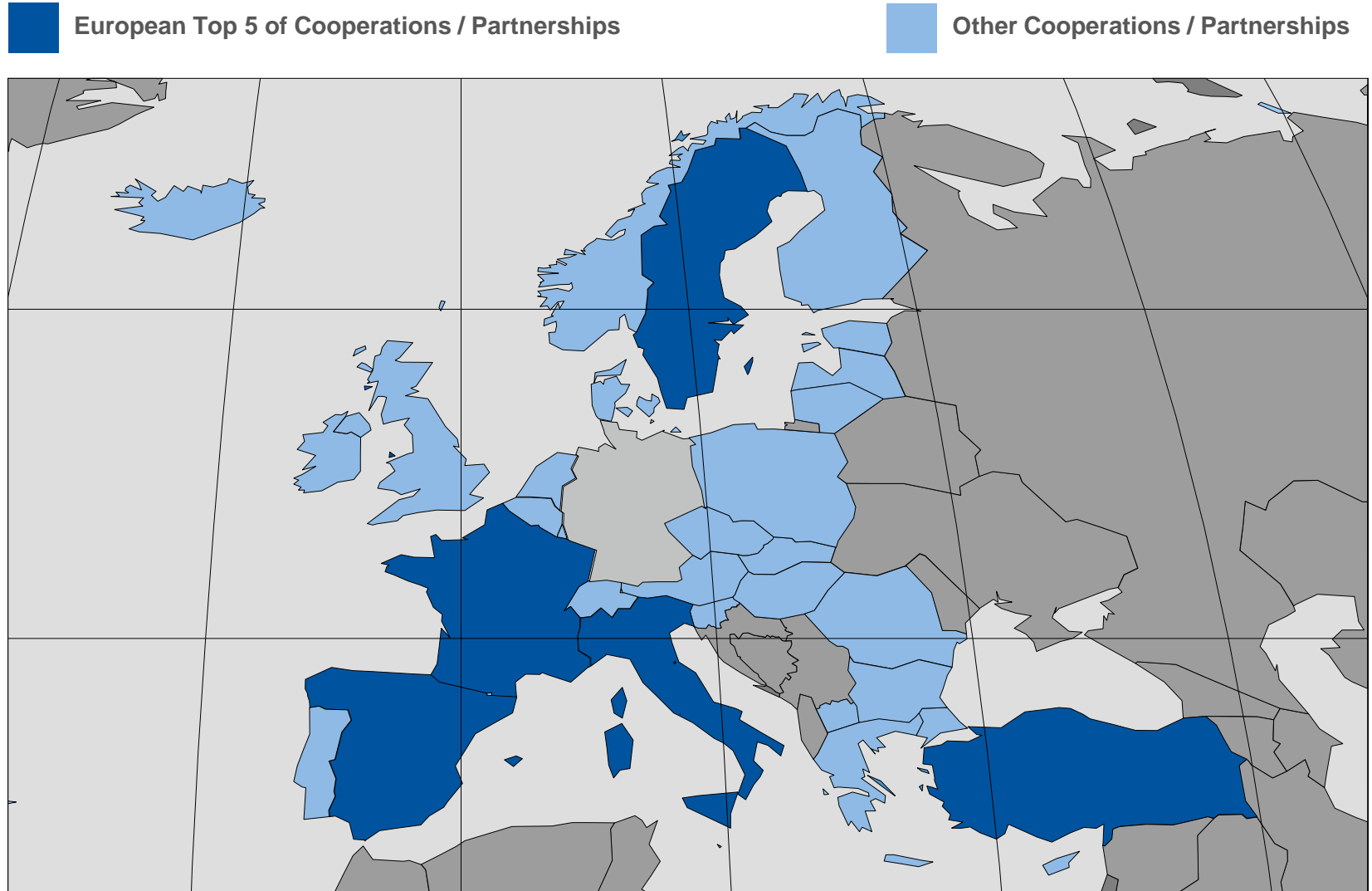
Fac. 6: Faculty of Electrical Engineering and Information Technology

Fac. 7: Faculty of Arts and Humanities

Fac. 8: Faculty of Business Administration and Economics

Fac. 10: Faculty of Medicine

Erasmus Partners & Agreements 2011



Campus Plan

