RWTH Aachen University

Thinking the Future!

RWTH AACHEN UNIVERSITY

Figures 2016

A total of 44,517 students

10,819 Students in first subject-related semester in WS 16/17

8,126 new enrolments

7,184 Graduations

540 Professors
(of which 52 Junior Professors)

2,175 Other academic staff

1,976 Non-academic staff

4,000 Staff from Third-Party Funding

154 Courses of study: undergraduate and postgraduate studies

14 Collaborative Research Centres

6 Transregional CRCs

8 Transregional CRCs with participation

29 Research Training Programmes
(of which 10 DFG Research Training Groups)

Excellence Initiative:

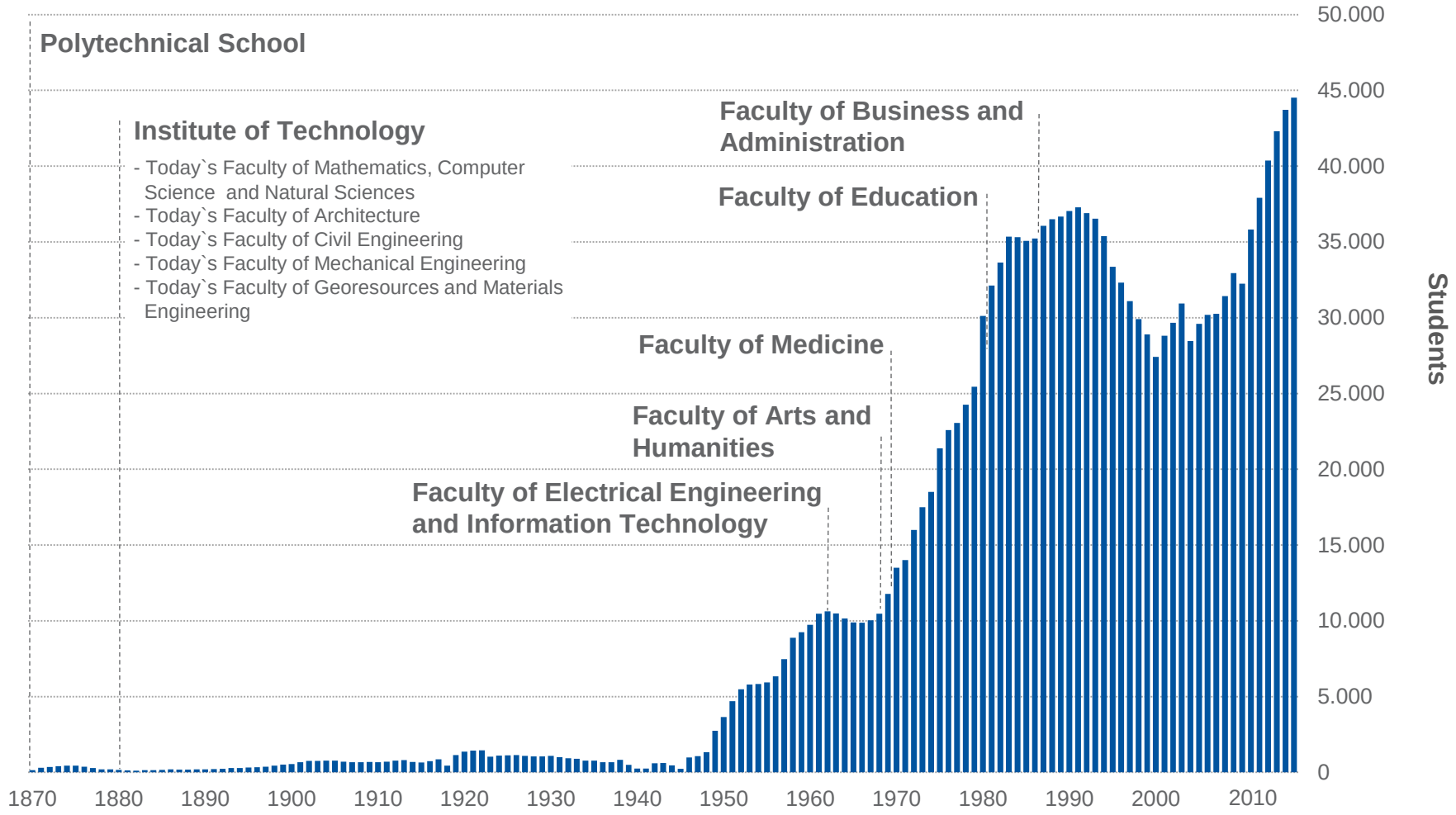
1 Graduate School (1st funding line)

3 Clusters of Excellence (2nd funding line)

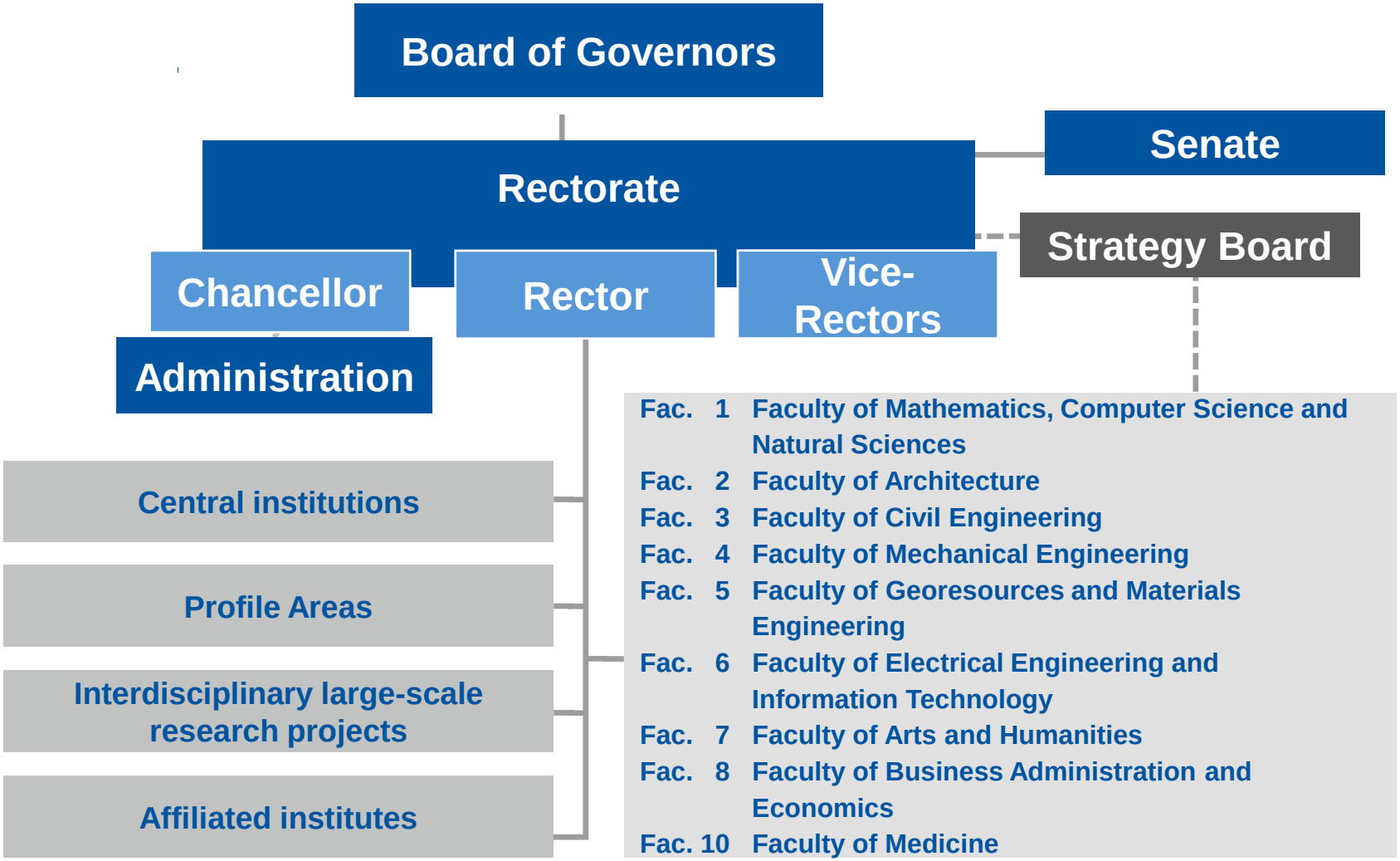
1 Institutional Strategy (3rd funding line)

€900.0 million Budget

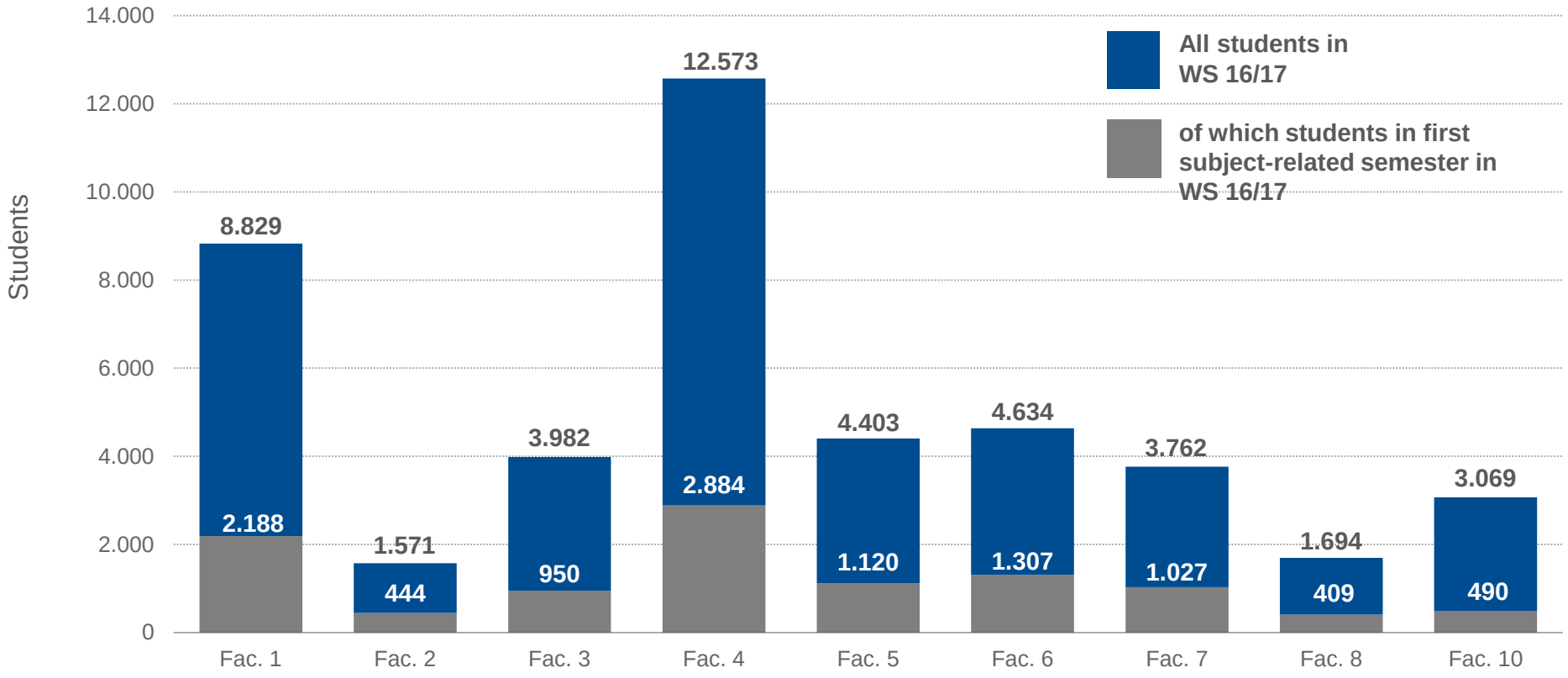
Development of RWTH Aachen University



Organisation

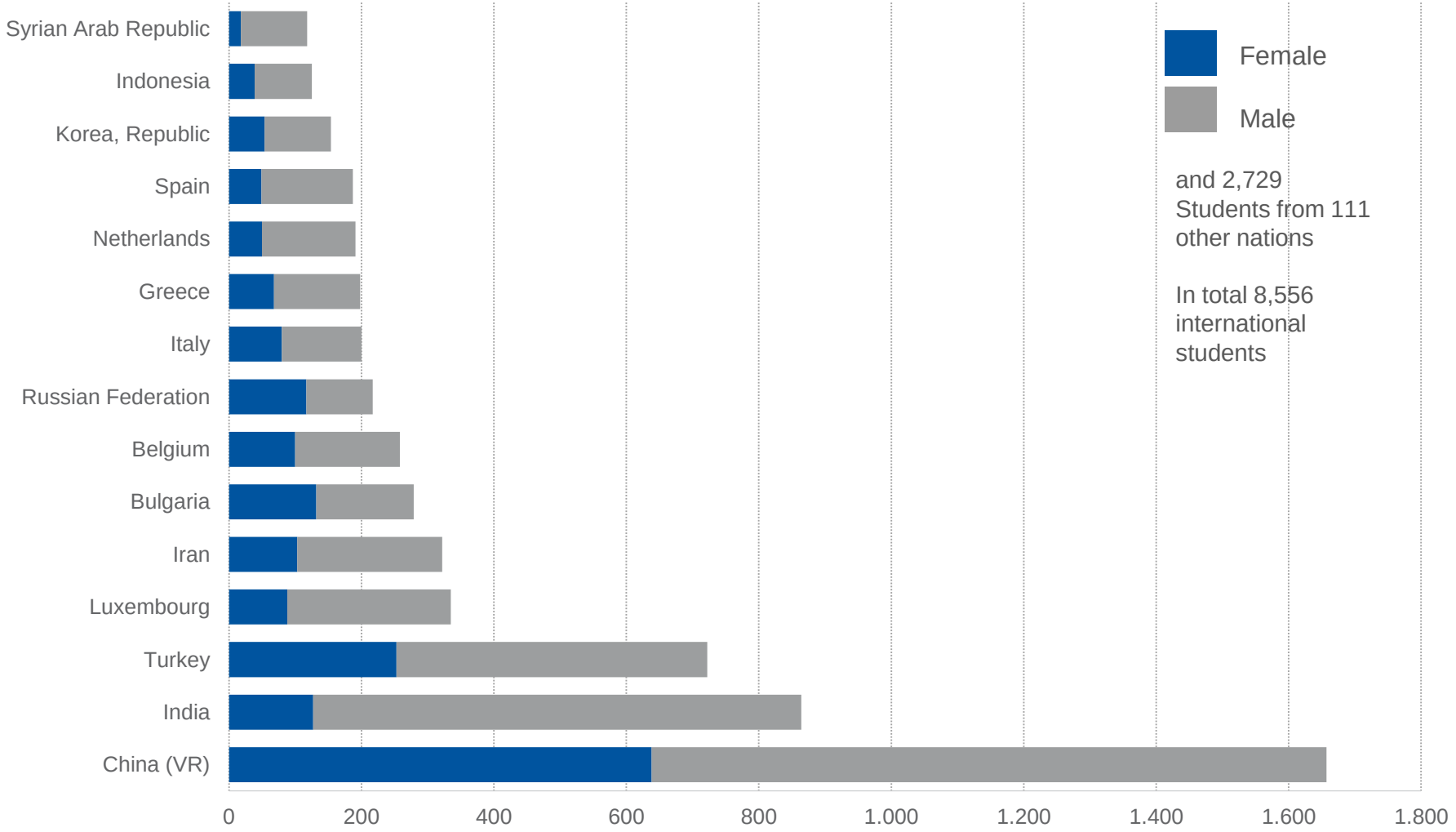


Students by Faculty



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 16/17
Top 15 Countries



Excellent Teaching & Learning

History

- 2008 Concept Development Teaching
- 2009 Award Competition excellent teachinng
- 2011 Sustainability assurance by Union-Country-Programme Teaching untill 2016
- 2011 Research oriented teaching in Institutional Strategy II
- 2016 continuation of the Union-Country-Programme bis 2020

Target 2020

- Improvement of fundamental teaching with comprehensive package of measures
- Development of innovative teaching- and learn-concepts, assistance focussed on students as well as an optimized qualitymangagement- and qualificationsystem
- Increase of success rate to 75% relating to students with positive enrolment recommendation without deduction of quality of graduates
- annual “Talk Lehre“ during lecture period

Quality Goals in Teaching

A. Students

Students in focus

- Guarantee of appropriate and achievable courses of study
- Complete information, mentoring and assistance
- Highly qualified and responsible graduates

B. Personnel

Backbone of the university

- Continuing professionalization of personnel
- Recruitment of excellent personnel
- Extension of international cooperation

C. Studies

As promise of qualification

- Education orientation on skills
- Advancement of international exchange
- Teaching target orientated synchronisation of contents of studies
- Integration of interdisciplinary competence

D. Structure

Basis for decisions

- Accurately fitting allocation of resources
- Guarantee of availability and quality of data

E. System

RWTH as learning organisation

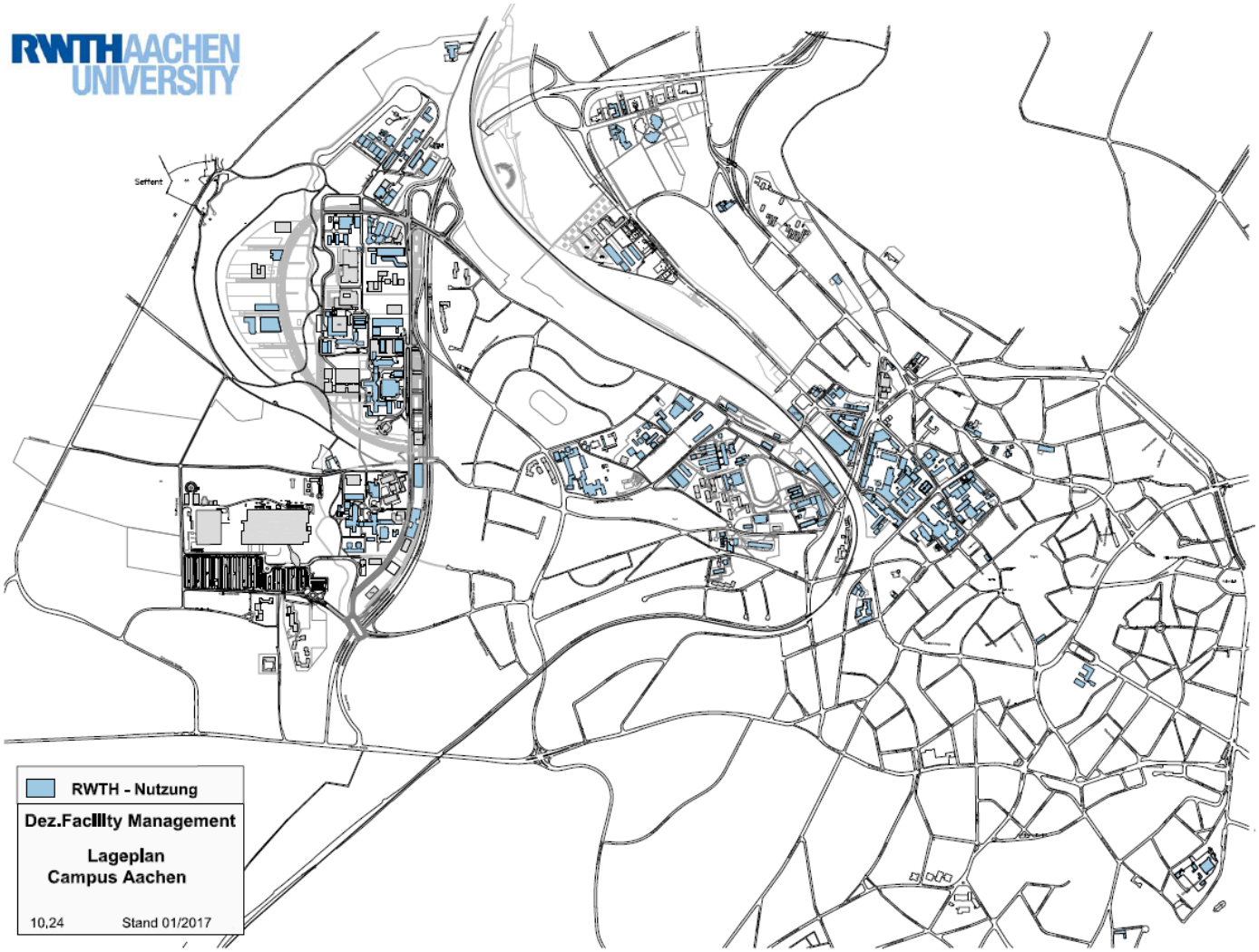
- Adoption and continues development of a QM system
- Continuing advancement of testing, teaching und learning methods
- Continuing improvement of organisational processes

Participation in Marie Curie Initial Training Networks (EU)

Participation in Marie Curie Initial Training Networks (EU)

InCeM	**Research Training Network on Integrated Component Cycling in Epithelial Cell Motility** RWTH Koordinator: Prof. Dr. med. Rudolf Leube, Chair of Molecular and Cellular Anatomy Coord. Organisation: RWTH Aachen
LISTEN	**Hands-free Voice-enabled Interface to Web Applications for Smart Home Environments** RWTH Koordinator: Prof. Dr. Hermann Ney, Chair of Computer Science 6 Coord. Organisation: Foundation for Research and Technology Hellas
HPC-LEAP	**High Performance Computing for Life sciences, Engneering and Physics** RWTH Koordinator: Prof. Paolo Carloni, Ph. D., Computational Biophysics Lab of German Research School (GRS) for Simulation Sciences / Chair of Computational Biophysics Coord. Organisation: The Cyprus Institute
ModComp-Shock	**Modelling and Computation of Shocks and Interfaces** RWTH Koordinator: Prof. Dr. rer. nat. Wolfgang Dahmen, Institut of Geometry and Applied Mathematics Coord. Organisation: University of Sussex
ModLife	**Advancing Modelling for Process-Product Innovation, Optimization, Monitoring and Control in Life Science Industries** RWTH Koordinator: Prof. Alexander Mitsos, Ph. D., Chair of Process Systems Engineering Coord. Organisation: Danmarks Tekniske Universitet

Campus Plan


RWTH - Nutzung
Dez.Facility Management
Lageplan
Campus Aachen
10,24
Stand 01/2017

Courses

Degrees offered by RWTH Aachen University

- Bachelor‘s degree
- Master‘s degree
- German State Exam (Medicine, Dentistry)
- Doctoral degree
- (Exchange studies)

Courses

Schools and Colleges

1. Mathematics – Computer Science – Natural Sciences
2. Architecture
3. Civil Engineering
4. Mechanical Engineering
5. Georesources and Material Sciences
6. Electrical Engineering and Computational Engineering
7. Humanities
8. Business Studies/Economics
10. Medicine

Course finder: http://www.rwth-aachen.de/cms/root/~yev/?lidx=1

Courses

Difference between „Numerus Clausus“ and „freely accessible“

Numerus Clausus:

more applicants

then places of study

Freely accessible:

less applicants

then places of study

Consequences of NC for applicants

- Numerus Clausus: applications are ranked according to the grade (as a rule of thumb: the better your grades, the more likely you are to receive a place of study)
- Freely accessible: all applications that are submitted before the deadline and meet the criteria of „eligiblity to access a German university“ (Hochschulzugangsberechtigung) and language proficiency receive an admission
- Courses in which it is hard to receive a place of study are usually: Medicine, Dentistry, Psychology, Business Studies

Language

Medium of instruction

- most courses are taught in German

- RWTH Aachen University offers some Master‘s degree programs in English:
  - Applied Geophysics (in cooperation with TU Delft and ETH Zürich)
  - Automotive Engineering
  - Biomedical Engineering
  - Physics (tuition fee for Master‘s College)
  - Media Informatics
  - Software Systems Engineering
  - Simulation Science
  - Electrical Power Eng.
  - Communications Eng.
  - Energy and Mineral Ressources
  - Geomaterials

Language

Master‘s degree programs of International Academy GmbH

- Computer Aided Conception and Production in Mechanical Engineering
- Management and Engineering in Computer Aided Mechanical Engineering
- Management and Engineering in Design Concepts and Structural Engineering of Industrial Facilities
- Management and Engineering in Electrical Power Systems
- Management and Engineering in Production Systems
- Management and Engineering in Technology, Innovation, Marketing and Entrepreneurship
- Management and Engineering in Water
- Production Systems Engineering
- Textile Engineering
- Lasers in Dentistry
- Laboratory Animal Science

- Specifics
  - tuition fee
  - applicants need 1 year of work experience
  - although offered by International Academy graduates receive a normal RWTH Aachen University degree

More information can be found at: http://www.academy.rwth-aachen.de/de/master

Language

German

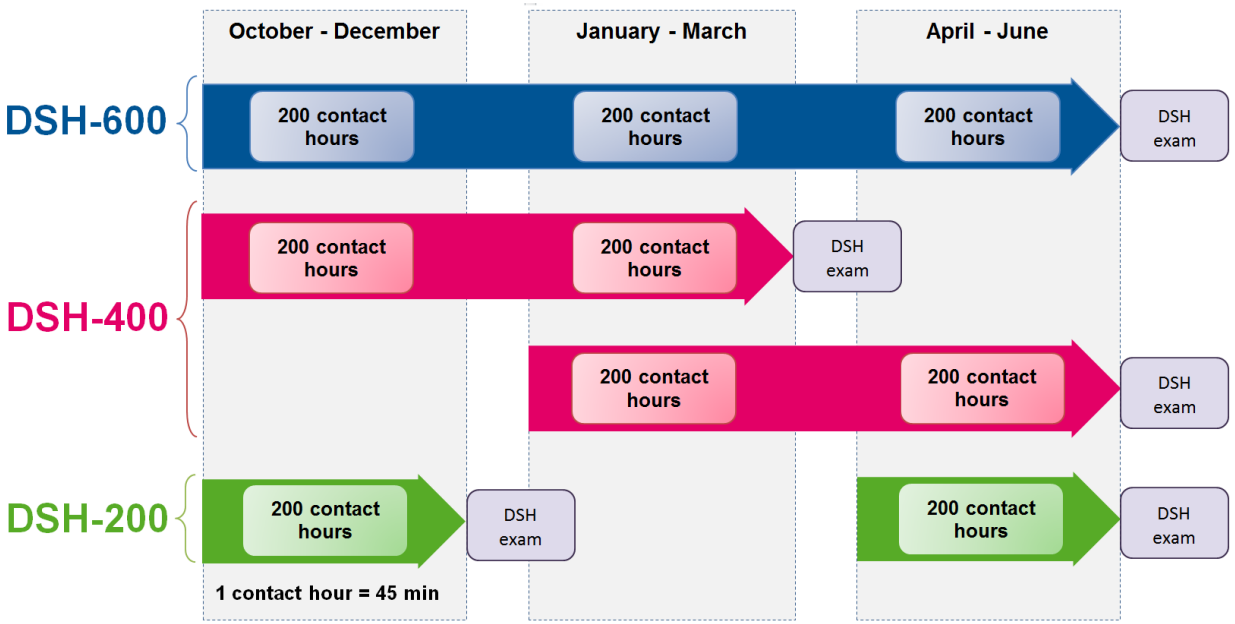
Accepted language proficiency tests:

Name	Abbreviation	Level/Grades
Deutsche Sprachprüfung für den Hochschulzugang	DSH	II or III
Test Deutsch als Fremdsprache	TestDaF	at least 4 in all four test categories
„Prüfungsteil Deutsch“ der Feststellungsprüfung an Studienkollegs	-	minimum grade 4
Deutsche Sprachdiplom der Kultusministerkonferenz - Zweite Stufe	DSD	minimum level II
Zeugnis über das bestandene Goethe-Zertifikat C 2: Großes Deutsches Sprachdiplom (GDS)	GDS	minimum: passed

Learning German at RWTH Aachen

- the language center of RWTH Aachen University offers German language courses that prepare international students for the participation in the DSH exams

- three different courses are offered:



Language

You need these language certificates in order to qualify:

	Goethe-Zertifikat	TestDaF
DSH-200	B2.2 passed	3 x TDN 4, 1 x TDN 3
DSH-400	B2.1 passed	2 x TDN 4, 2 x TDN 3
DSH-600	A2.2 passed	-

Example for application

- Apply directly at the language center!
- If your application is accepted, the language center will send you a letter of acceptance.
- As soon as you start the language course, you may come to the international admission division (Abt. 2.1) of the International Office. If you are formally qualified to enter into studies, you may be enrolled. (Bring all your necessary papers!)
- Enrollment during a language course is not a guarantee of a place of study later on!!

Language Center

More information can be obtained from the service point of the language center:

Language Center Address:
RWTH Arts and Humanities Language Center
Eilfschornsteinstr. 15
52056 Aachen

Location: SFo 12, Kármán Auditorium, Ground Floor

Opening Hours
Monday to Friday 12:15 - 13:45

Contact
E-mail: info@sz.rwth-aachen.de
Phone: +49 241 80 90170
Fax: +49 241 80 92342

Language

English

- accepted tests: IELTS, Toefl and CAE
- please keep in mind: There is no fixed minimum passing grade for all Master‘s degree programs. Most programs currently specify their own minimum passing grade. Please consult the information webpages of the Master‘s degree program for the specific minimum grade you need to attain.

- exemption: applicants who successfully completed a school education or university degree in either Great Britain, Ireland, Canada, USA, New Zealand or Australia are exempted from providing an English language proficiency test!
- **Not exempted** are applicants who successfully completed a degree course taught in English or attended a school in which English was the medium of education if the school or university was in another country than those specified above!

Deadlines

Application deadlines

	Winter Semester	Summer Semester
Bachelor‘s degree programs and state exam	July 15	January 15
Master‘s degree programs (applicants from third-party countries)	March 1	September 1
Master‘s degree program (citizens of EU/EEC)	July 15	January 15
Doctoral studies	no deadline	no deadline

Application for undergraduate studies

admission requirements

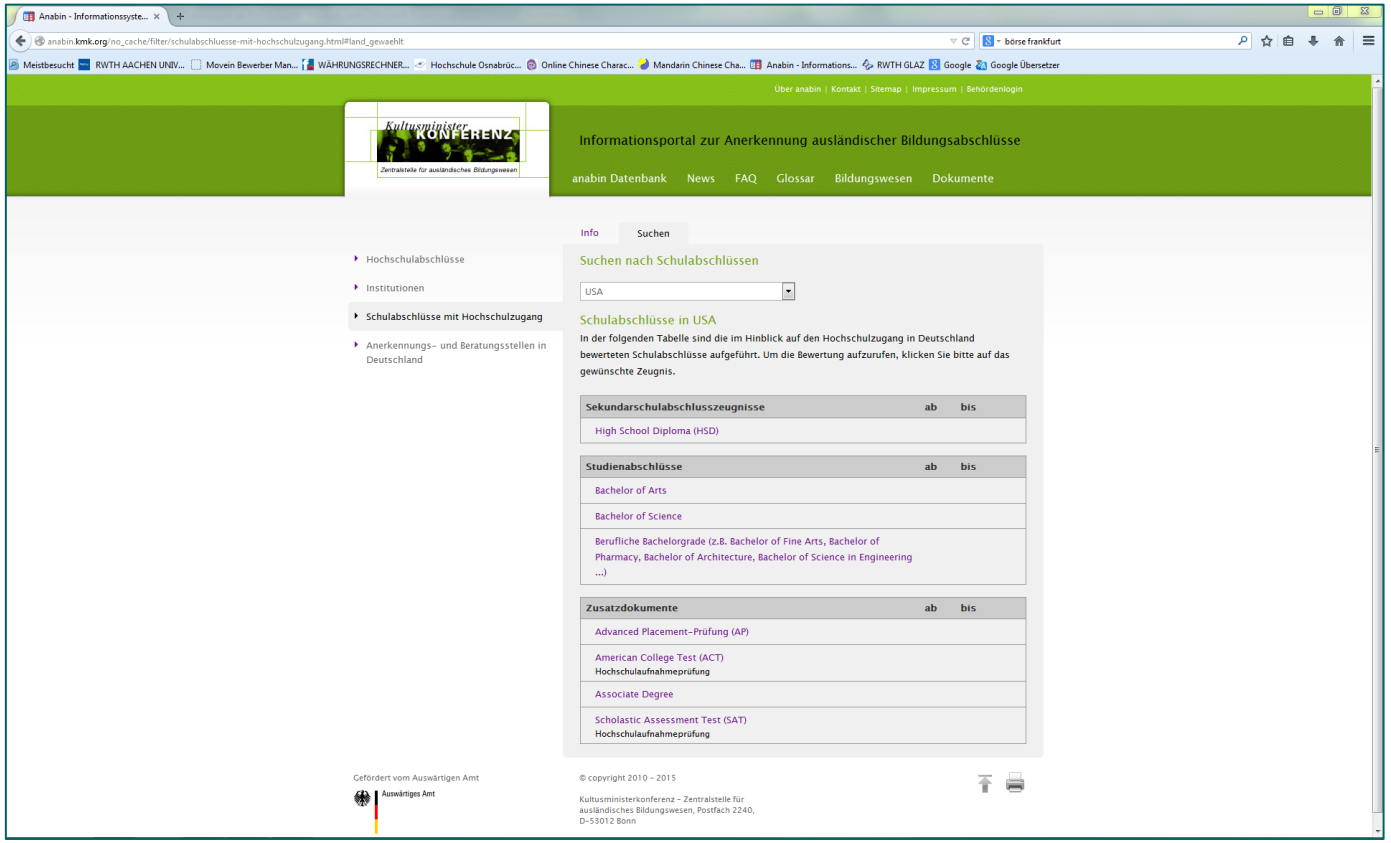
- „Hochschulzugangsberechtigung“: in Germany in order to enter into undergraduate studies you need to have finished higher secondary education successfully (proof of this is usually the German Abitur). International applicants must show that they have received an education comparable to the German Abitur. Often the completion of secondary education as well as a university entrance exam and a year of study at a university in your home country are required. Please check your eligibility for studing in Germany at http://anabin.kmk.org (Website only in German!)

- proof of language proficiency

- for applicants of third-party countries: **minimum grade 2,5 in the German system!**

Application for undergraduate studies

Eligibility to study in Germany: anabin database



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Application for undergraduate studies

How to convert your grade into the German grading system

$$\left(\frac{N_{\max} - N_d}{N_{\max} - N_{\min}} \right) \times 3 + 1 = x$$

x	= German grade
N_{max}	= maximum grade of the grading scale of your certificate
N_{min}	= minimum passing grade of the grading scale (note: minimum passing grade not minimum overall grade)
N_d	= your grade

Application for undergraduate studies

Self-Assessment

• before applying for a Bachelor‘s degree you need to take part in the self assessment of RWTH Aachen University:

- purpose: helping you decide which study program to choose
- where to find it: http://www.global-assess.rwth-aachen.de/rwth/tm/
- what is the self-assessment:
  - online-questionaire concerning your abilities and predispositions
  - result will be a study recommendation
  - your answers are strictly private and cannot be accessed by anyone
- at the end of the questuionaire you have to print the „Teilnahmebescheinigung“ and submit it together with your application documents

RWTH AACHEN UNIVERSITY

Self Assessment
für Studieninteressierte

Teilnahmebescheinigung

Dieter Janssen

geboren am 13.12.1901,

hat am 08.01.2015 am SelfAssessment im Bereich
Geistes-, Sprach- und Kommunikationswissenschaften der RWTH Aachen teilgenommen.

Bei Studiengängen, bei denen die Teilnahme an dem entsprechenden SelfAssessment Voraussetzung zur Aufnahme des Studiums ist, muss diese Bescheinigung bei der Einschreibung vorgelegt werden.

Hiermit bestätige ich, _____

dieses SelfAssessment eigenhändig durchgeführt zu haben.

_____
Unterschrift

0ESCGK0994E5J8EQI4P7

0ESCGK0994

E5J8EQI4P7

Application for undergraduate studies

Documents you need to hand in in paper (www.rwth-aachen.de/ioa)

- application form (print out at the end of online application)
- curriculum vitae
- letter on motivation for studying at RWTH Aachen University
- documents necessary to prove your eligibility for studying in Germany (usually one or more of the following: school certificate, university entrance exam results, transcript of academic record of courses attended in university, „Feststellungsprüfung“ of German Studienkolleg)
- translation by certified translator of your documents if these have not been issued in German or English
- proof of language proficiency

Application for undergraduate studies

Documents to submit during the online application (www.rwth-aachen.de/ioam)

- application form (print out at the end of online application)
- curriculum vitae
- letter on motivation for studying at RWTH Aachen University
- documents necessary to prove your eligibility for studying in Germany (usually one or more of the following: school certificate, university entrance exam results, transcript of academic record of courses attended in university, „Feststellungsprüfung“ of German Studienkolleg)
- translation by certified translator of your documents if these have not been issued in German or English
- proof of language proficiency
- TestAS result sheet for Medicine and Dentistry

➔ All documents may be uploaded as pdf-files! You only need to print out the application form, sign it and send it to us.

Application for undergraduate studies

Process of application once submitted

- check of application in time (applications after deadline are rejected)
  - check of the eligibility of entering a German university
    - check of language proficiency
      - check of minimum grade

freely accessibly study program:
- admission, conditional admission or rejection

Numerus-Clausus-study program:
-ranking of applications

- admission or rejection

RWTH AACHEN UNIVERSITY

Difference between consecutive and non-consecutive programs

- non consecutive Master‘s degree program = you do not need to continue the field of study from your Bachelor‘s degree (example: Biomedical Engineering; you may apply with a Bachelor in Mechanical Eng., Biology or Medicine)

- consecutive Master‘s degree program = you need to continue the field of study of your Bachelor‘s degree (or comparable degree); Master‘s degree program in fact is a continuation of the Bachelor‘s degree program; three possible outcomes for your application:
  - Bachelor is completely sufficient → unconditional admission
  - Bachelor is insufficient, but only up to 30 credit points are missing → conditional admission (missing credit points must be obtained during study program)
  - Bachelor is insufficient (either because it is from a different field of study or because too many cp are missing) → rejection

Application for Graduate Studies

criteria for student selection

- content of Bachelor‘s degree studies (is your Bachelor a sufficient preparation for the Master‘s degree program of RWTH Aachen University)

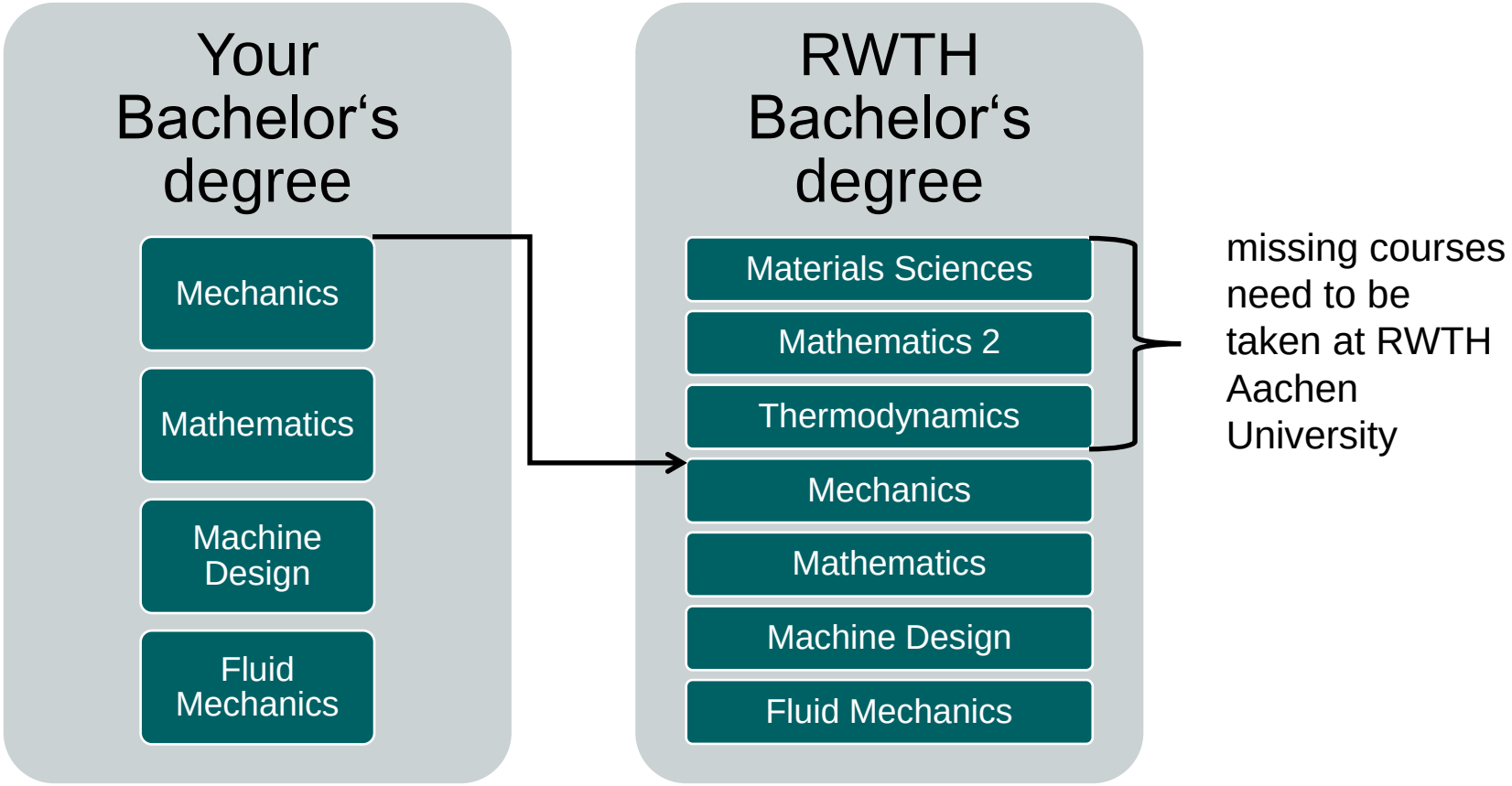
- grades in all important subjects

- reputation of the university at which you received your degree

- additional information such as interview or GRE or GATE etc. (depends on what the study program requires, please check info pages)

Application for Graduate Studies

Application selection in consecutive Master‘s degree programs



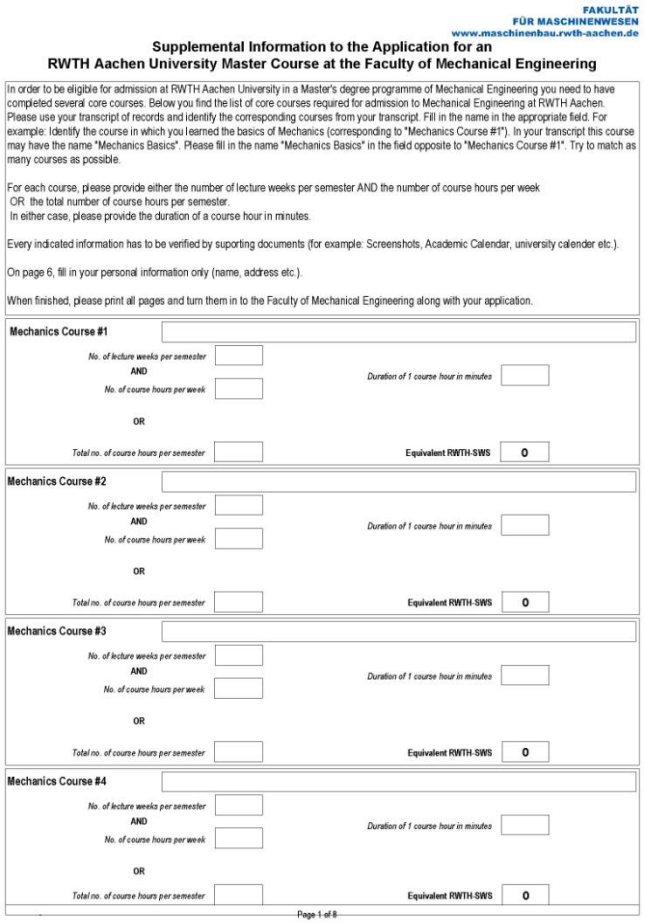
Option of a double application

- When in doubt about the chances of your application we recommend a double application:
  - application 1: consecutive Master‘s degree program
  - application 2: corresponding Bachelor‘s degree program (start at a higher semester)

Application for Graduate Studies

Documents to submit

- application form (print out at the end of online application)
- curriculum vitae
- letter on motivation for studying at RWTH Aachen University
- Bachelor‘s degree certificate and transcript
- translation by certified translator of your documents if these have not been issued in German or English
- proof of language proficiency
- additionally required documents: supplement form, GRE, GATE, letter of recommendation etc.



FAKULTÄT
FÜR MASCHINENWESEN
www.maschinenbau.rwth-aachen.de

Supplemental Information to the Application for an RWTH Aachen University Master Course at the Faculty of Mechanical Engineering

In order to be eligible for admission at RWTH Aachen University in a Master's degree programme of Mechanical Engineering you need to have completed several core courses. Below you find the list of core courses required for admission to Mechanical Engineering at RWTH Aachen. Please use your transcript of records and identify the corresponding courses from your transcript. Fill in the name in the appropriate field. For example: Identify the course in which you learned the basics of Mechanics (corresponding to "Mechanics Course #1"). In your transcript this course may have the name "Mechanics Basics". Please fill in the name "Mechanics Basics" in the field opposite to "Mechanics Course #1". Try to match as many courses as possible.

For each course, please provide either the number of lecture weeks per semester AND the number of course hours per week
OR the total number of course hours per semester.
In either case, please provide the duration of a course hour in minutes.

Every indicated information has to be verified by suporting documents (for example: Screenshots, Academic Calendar, university calender etc.).

On page 6, fill in your personal information only (name, address etc.).

When finished, please print all pages and turn them in to the Faculty of Mechanical Engineering along with your application.

Mechanics Course #1
No. of lecture weeks per semester
AND
No. of course hours per week
OR
Total no. of course hours per semester
Duration of 1 course hour in minutes
Equivalent RWTH-SWS 0

Mechanics Course #2
No. of lecture weeks per semester
AND
No. of course hours per week
OR
Total no. of course hours per semester
Duration of 1 course hour in minutes
Equivalent RWTH-SWS 0

Mechanics Course #3
No. of lecture weeks per semester
AND
No. of course hours per week
OR
Total no. of course hours per semester
Duration of 1 course hour in minutes
Equivalent RWTH-SWS 0

Mechanics Course #4
No. of lecture weeks per semester
AND
No. of course hours per week
OR
Total no. of course hours per semester
Duration of 1 course hour in minutes
Equivalent RWTH-SWS 0

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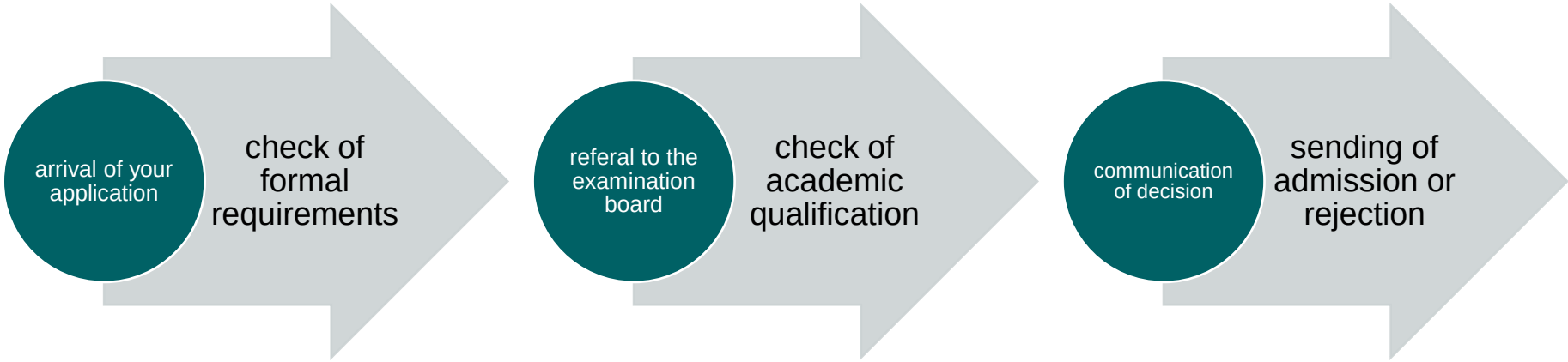
Application for Graduate Studies

Process after submission of your application



Application for Doctoral Studies

Doctoral Studies at RWTH Aachen University

- doctoral studies are usually a supervised, but largely independent scientific research project
- currently, there are only a few structured doctoral programs
- time frame: usually between 3 and 5 years
- result: publication of research results in form of a thesis (book or several articles)
- legal framework: regulation of doctoral studies of the department (Promotionsordnung)

Application for doctoral studies

Finding a supervisor

1. Find out what you would like to do: Which subject would I like to research in the coming years?

2. Identify a supervisor (Doktorvater): After having identified your own research interests you should look for a scientist who is well known in this field of research

3. Contact a suitable supervisor

4. If the supervisor agrees to accept you as doctoral student you should clarify the terms of your acceptance (e.g. does the supervisor expects you to be financed by a third party, does the supervisor expects you to help in teaching or in administration etc.)

Application for doctoral studies

Contacting a supervisor

- Alternative 1
  - send a written application:
    - content should be: cover letter, cv, certificates, short project proposal, short samples of your work
- Alternative 2
  - apply for a job offering: www.rwth-aachen.de/cms/root/~buym/
- Alternative 3
  - ask a professor at your home university to recommend you to his or her colleague at our university

Application for doctoral studies

Confirmation of supervision

- if a supervisor accept you, he or she needs to issue you a letter of confirmation

- a form for this letter can be found here: www.rwth-aachen.de/cms/root/~cgex/

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BETREUUNGSBESTÄTIGUNG

für die Einschreibung zum Promotionsstudium

Bitte schicken an:

International Office der RWTH Aachen
Abteilung 2.1
Templergraben 57
52066 Aachen

Betreuungsbestätigung für:

☐ Frau ☐ Herr

Nachname: _____

Vorname: _____

Geburtsdatum: _____ **Geburtsort:** _____

Nationalität: _____

Matrikel-Nr.: _____

(Matrikelnr. bitte nur eintragen, falls die zu betreuende Person schon einmal Studierender an der RWTH Aachen war)

Hiermit bestätige ich, dass die oben genannte Person durch mich fachlich betreut wird und der von mir geleiteten fachlichen Einheit zugeordnet ist. Die/der Betreffende wird unter meiner Fachaufsicht mit dem Ziel der Erlangung des Doktorgrades studieren und arbeiten.
Diese Bestätigung stellt keine Zulassung zur Promotion dar. Über diese kann erst entschieden werden, wenn die/der Betreffende die Voraussetzungen gemäß Promotionsordnung erfüllt.

Die Betreuung erfolgt ab _____

Die Promotion wird erfolgen ☐ an der RWTH Aachen ☐ einer anderen Universität.

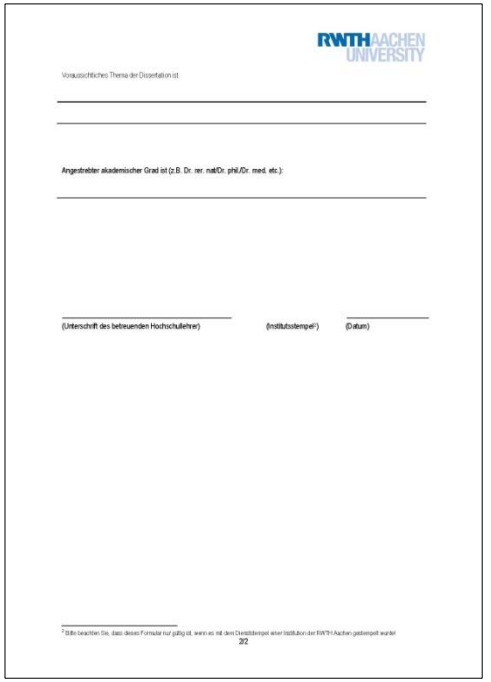
Die Sprachkenntnisse des/der Betreffenden müssen überprüft werden: ☐ ja ☐ nein
Falls ja, sind welche Sprachkenntnisse erforderlich? ☐ Deutsch ☐ Englisch

Nur bei chinesischen Bewerberinnen/Bewerbern:
Soll die/der Betreffende ein Zertifikat der APS[1] einreichen? ☐ ja ☐ nein

(bitte wenden)

[1] Die APS ist die Akademische Prüfstelle der deutschen Botschaft in China. Sie überprüft die Authentizität der Zeugnisse von Bewerberinnen und Bewerbern aus China. Wir empfehlen die Zeugnisse überprüfen zu lassen, wenn die Person kaum oder nicht weiter bekannt ist. Wenn jedoch feststeht, dass die/die Betreffende authentische Zeugnisse vorlegen kann (z. B. weil durch einen gut bekannten Hochschullehrer aus China empfohlen), sollte auf ein APS-Zertifikat verzichtet werden.

1/2



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Voraussichtliches Thema der Dissertation ist

_____

_____

Angestrebter akademischer Grad ist (z.B. Dr. rer. nat/Dr. phil./Dr. med. etc.):

_____

_____ _____ _____

(Unterschrift des betreuenden Hochschullehrer) (Institutsstempel[2]) (Datum)

_____

[2] Bitte beachten Sie, dass dieses Formular nur gültig ist, wenn es mit dem Dienststempel einer Institution der RWTH Aachen gestempelt wurde

2/2

Application for doctoral studies

Online application and application package

- you need to apply online at www.rwth-aachen.de/ioa

- please submit the application form (print out at the end of online application) together with:
  - cv
  - confirmation of supervision
  - copies of all certificates (Bachelor‘s and Master‘s degree)
  - copies of all transcripts (Bachelor‘s and Master‘s degree)
  - if documents are not in English or German you need to submit a translation from an officially certified translator

There are no deadlines for this application.

Further information:

Address you need to send your applications to:

RWTH Aachen University
Abt. 2.1
Templergraben 57
52062 Aachen
Germany

Email: int-zugang@rwth-aachen.de
Phone: 0049 241 8090674

Information online:
www.rwth-aachen.de/cms/root/~egg