TECHNISCHE UNIVERSITÄT DRESDEN

DRESDEN concept

Faculty of Computer Science
Institute of Systems Architecture

Master's Programme in Distributed Systems Engineering

Dr.-Ing. Markus Wutzler

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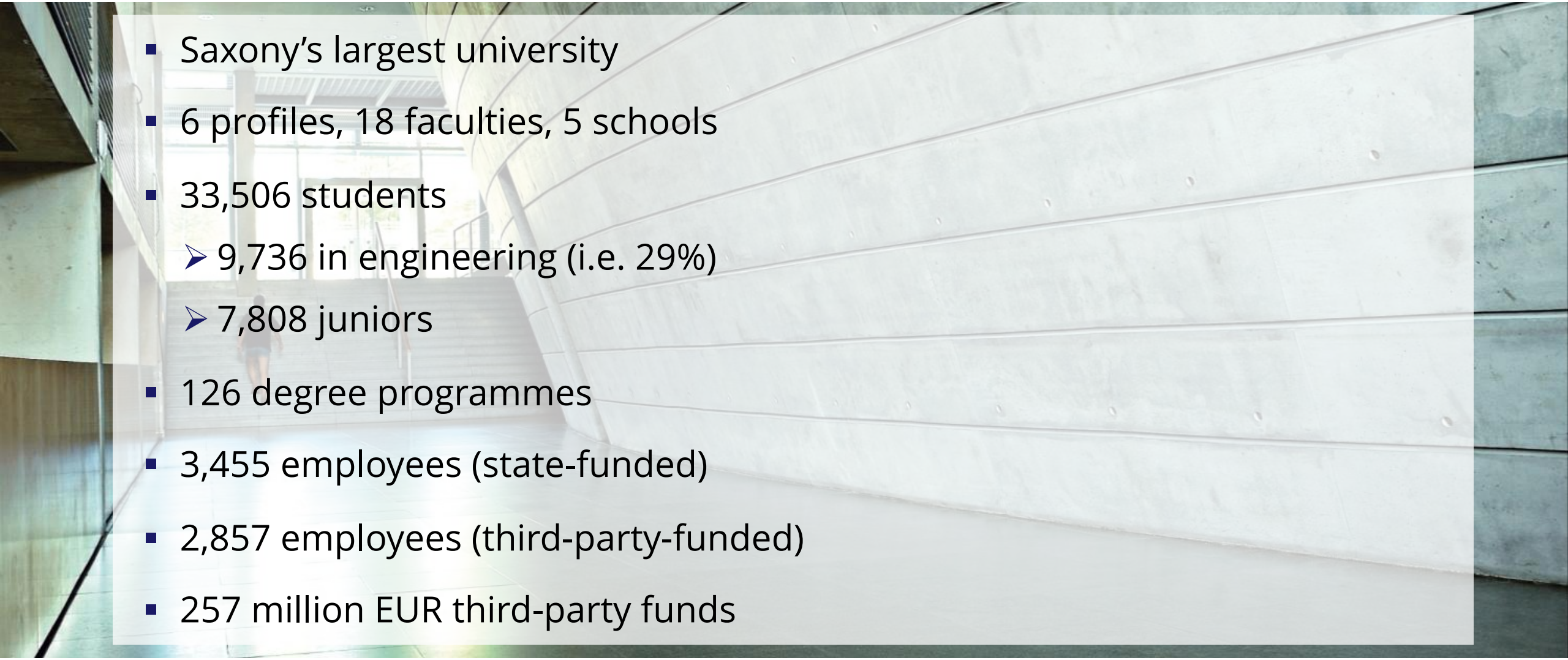
Dresden, October 9, 2019

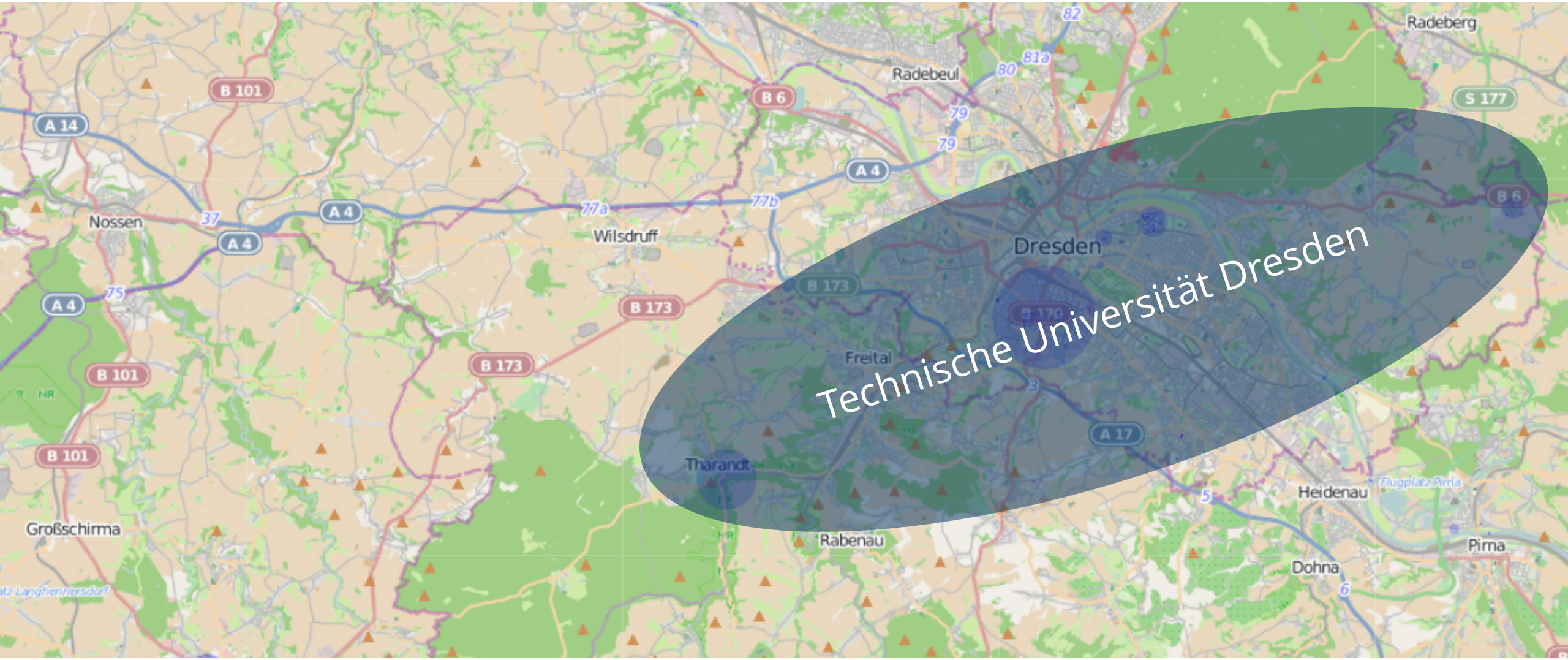
TU Dresden

(numbers as of November 2017)

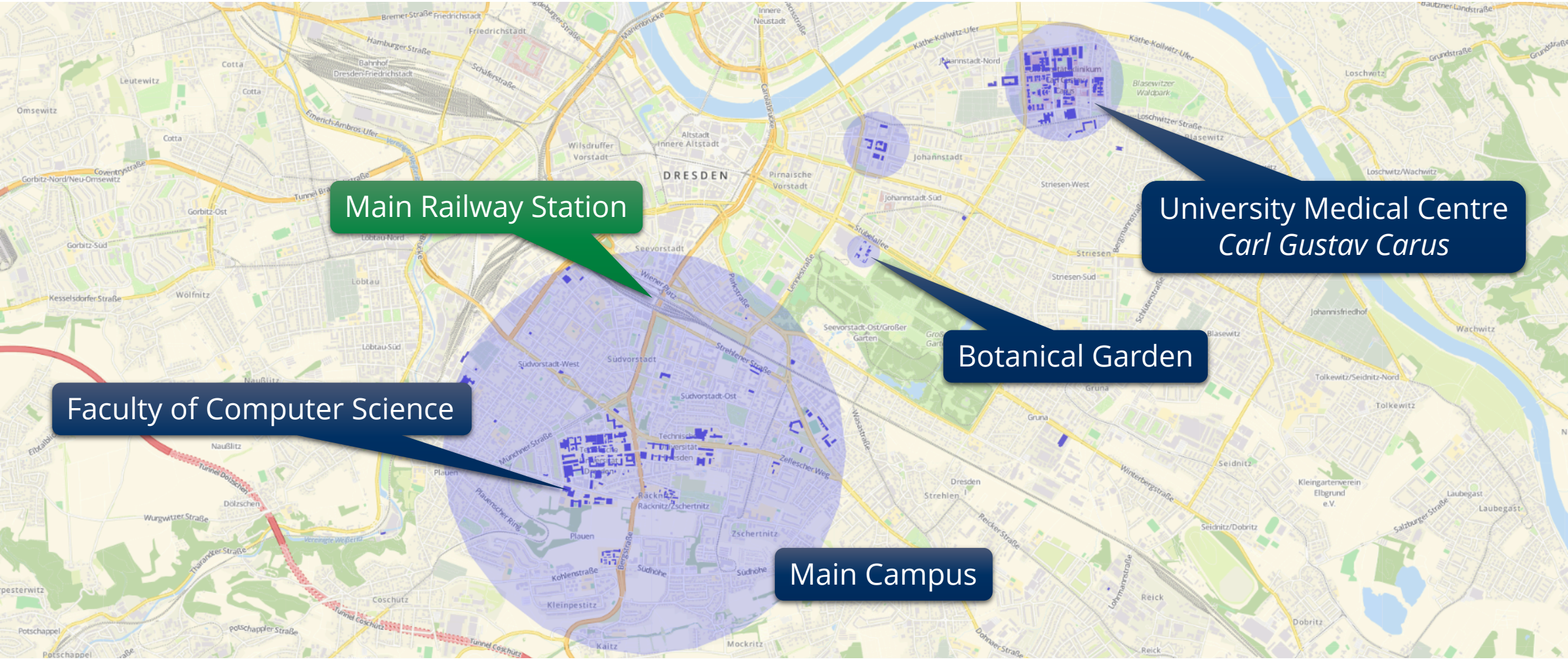


- Saxony's largest university
- 6 profiles, 18 faculties, 5 schools
- 33,506 students
  - ➢ 9,736 in engineering (i.e. 29%)
  - ➢ 7,808 juniors
- 126 degree programmes
- 3,455 employees (state-funded)
- 2,857 employees (third-party-funded)
- 257 million EUR third-party funds

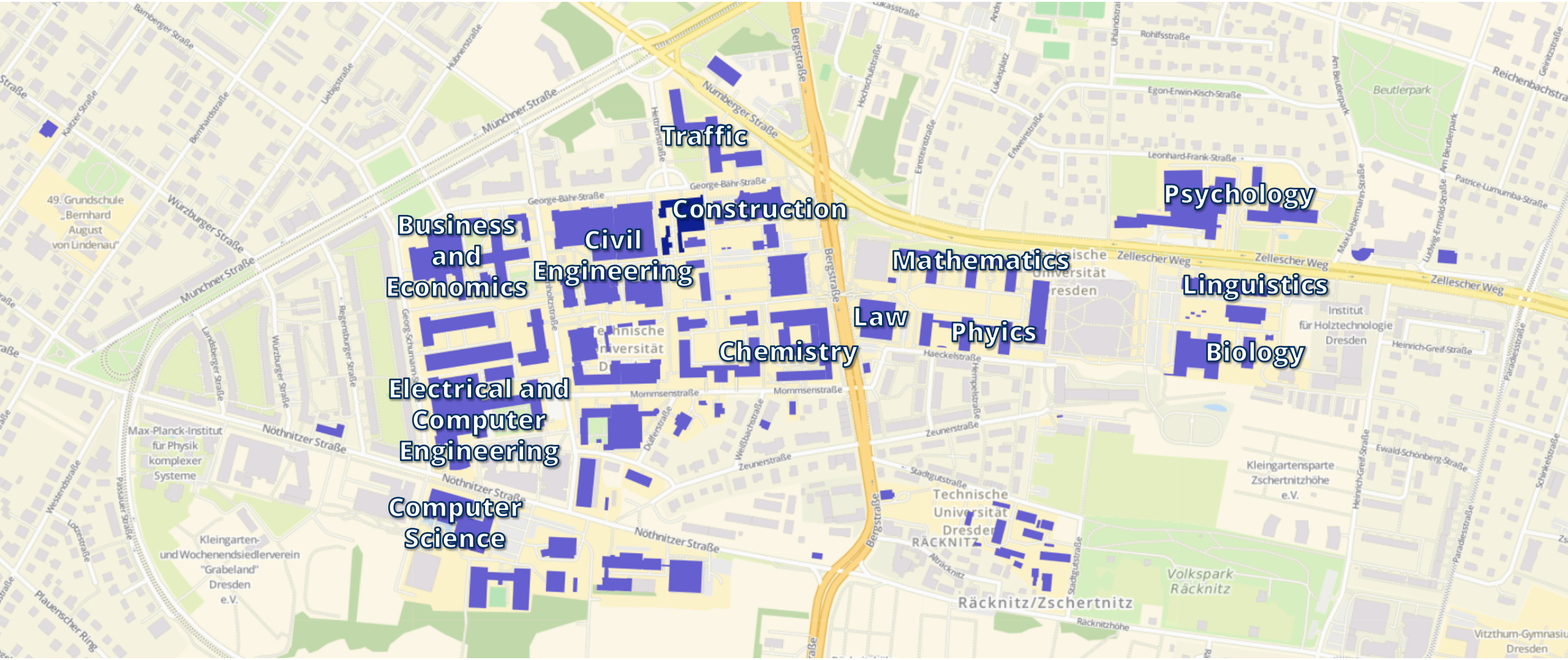
TU Dresden – Region



TU Dresden – City



TU Dresden – Main Campus

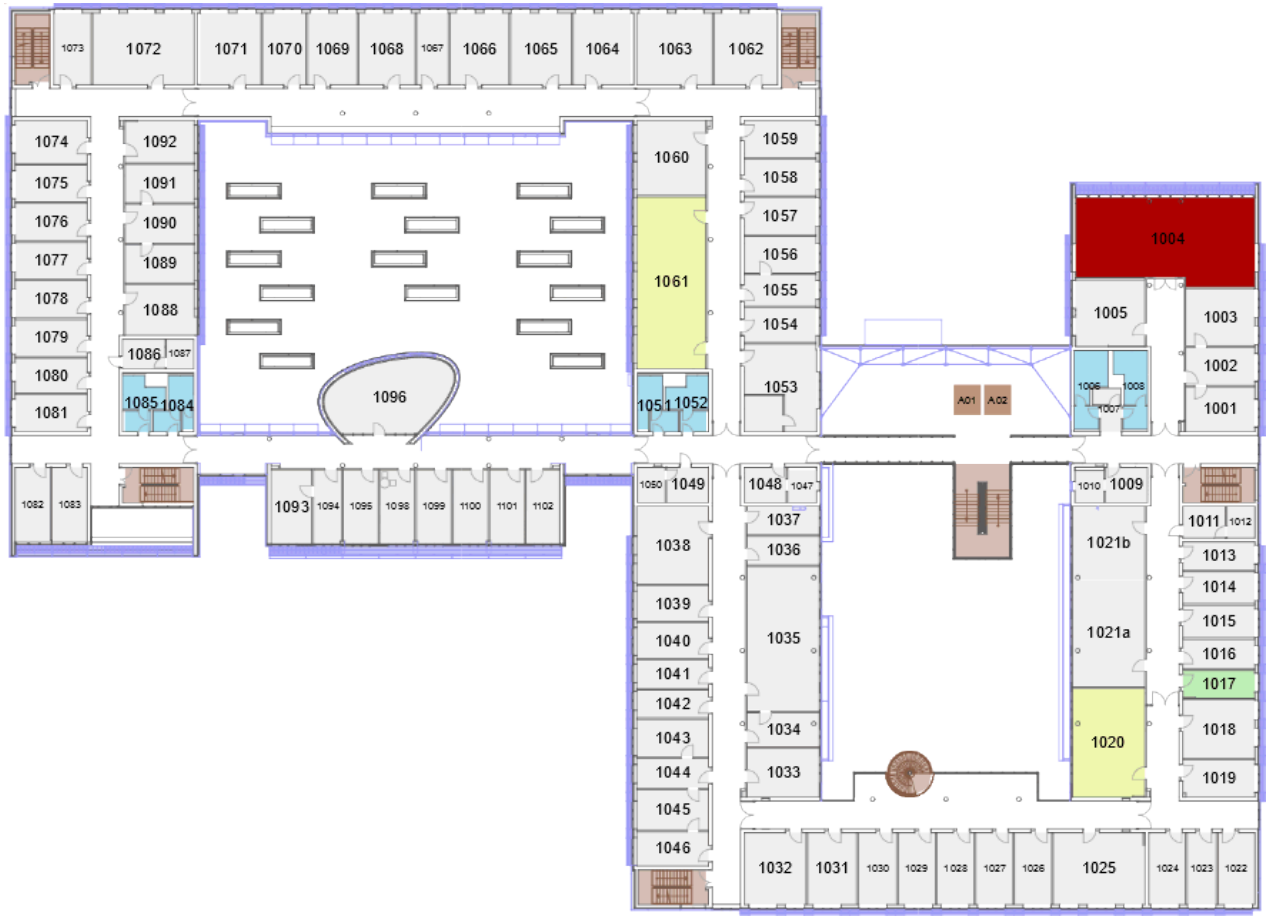


Faculty of Computer Science

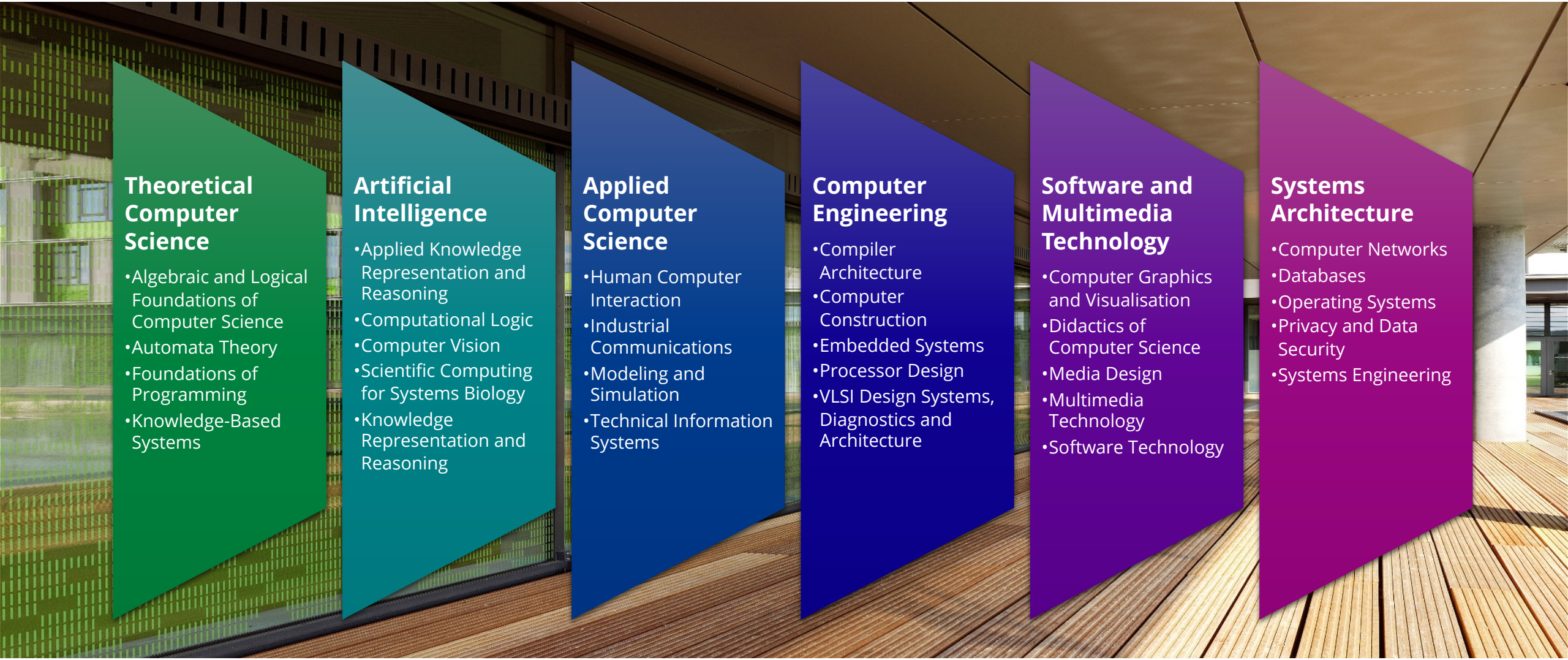
Don’t get lost – find your way!

— navigator.tu-dresden.de

— mapbiquitous.inf.tu-dresden.de



Institutes and Chairs



Faculty of Computer Science – Students

(preliminary numbers of winter term 2019/2020)

		Junior	Total
Computer Science	Bachelor of Science	258	726
	Diploma	70	399
	Master of Science	35	153
Media Computer Science	Bachelor of Science	115	301
	Master of Science	14	83
Distributed Systems Engineering	**Master of Science**	**26**	**69**
Computational Logic	Master of Science	14	30
Computational Modeling and Simulation	Master of Science	132	162
Doctorate	Ph.D.		112
Total		**696**	**2101**

DSE Master’s Degree Programme

DSE Master's Degree Programme

2-year full-time master's degree programme

focusing on advanced topics of

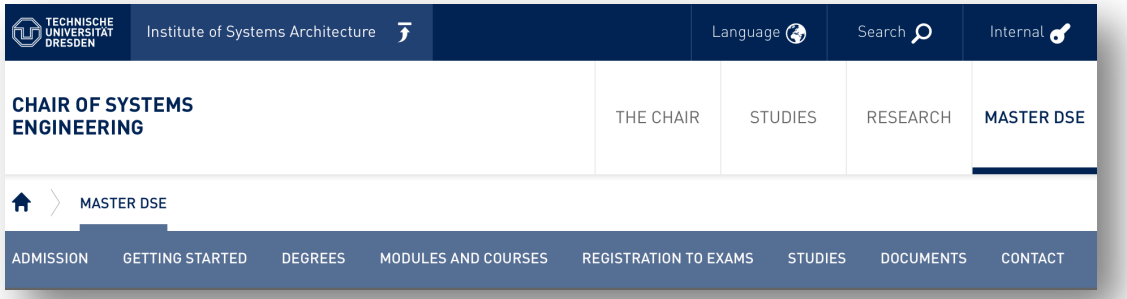
— distributed (software) systems engineering

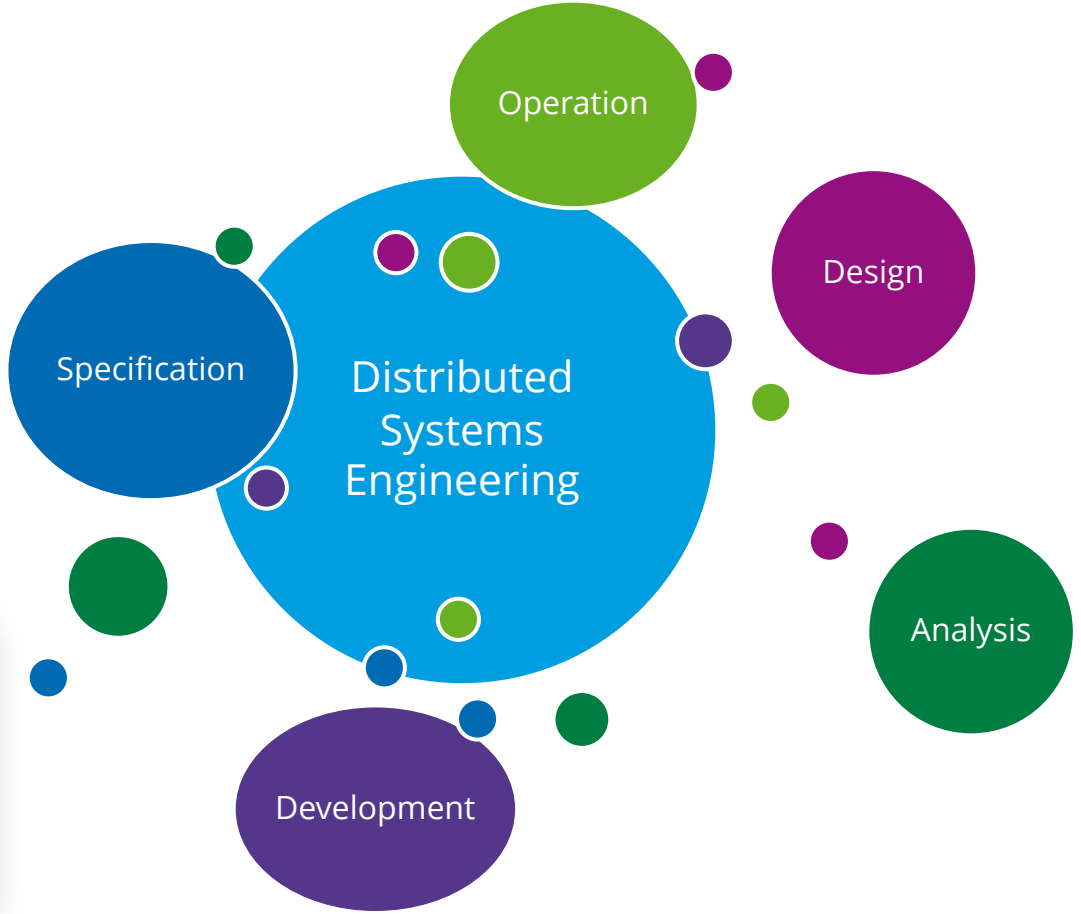
with special emphasis on

— secure software for networked and distributed systems

— mobile and ubiquitous computing

https://dse.inf.tu-dresden.de





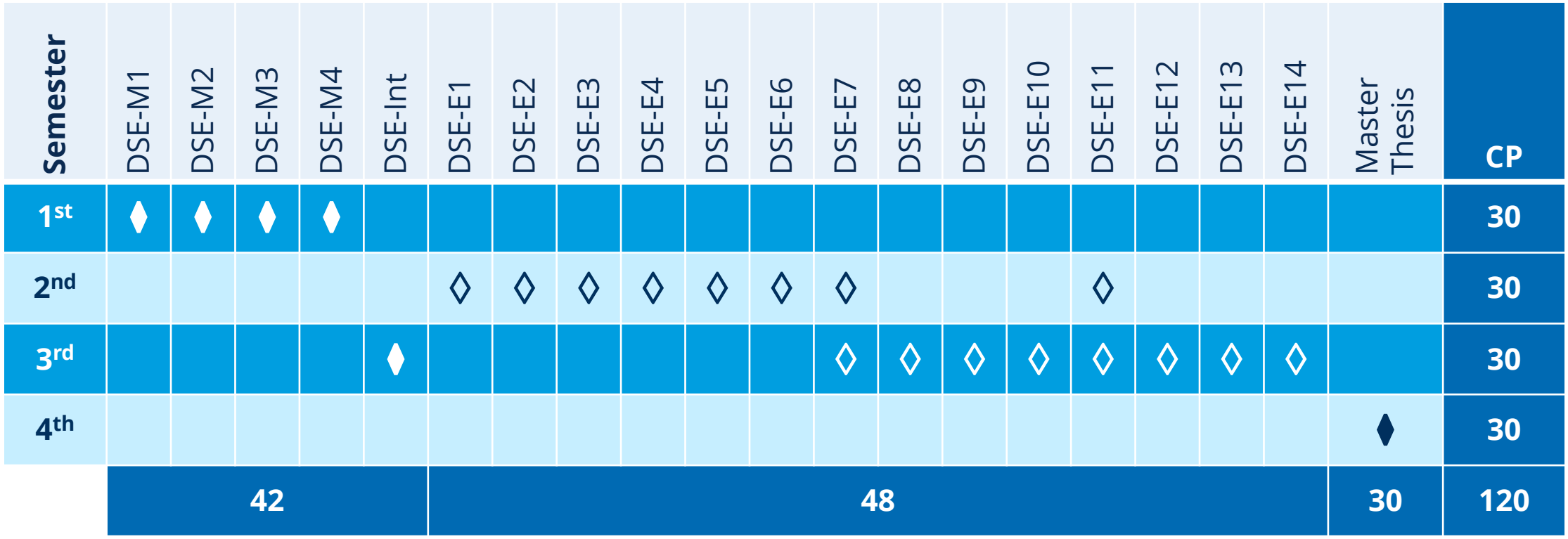
Curriculum

master's thesis	• thesis (29 CP) • defense (1 CP)
compulsory elective modules	• 48 CP out of 14 compulsory elective modules
mandatory internship	• 2 placements (each 6 CP) or • 1 assignment paper (12 CP)
mandatory lectures	• Systems Engineering (9 CP) • Ubiquitous Systems (7 CP) • Transactional & Secure Platforms (9 CP) • System Design (5 CP)

Curriculum: Compulsory Elective Subjects

#	Module	SWS (L/T/S/P)	Credits
DSE-14-E1	Advanced Security and Cryptography	2 / 2	6
DSE-14-E2	Wireless Sensor Networks	2 / 0 / 2	6
DSE-14-E3	Distributed Operating Systems	2 / 1 / 1	6
DSE-14-E4	Component-based Software Engineering	2 / 2	6
DSE-14-E5	Selected Areas of Internet-based Systems	4 / 4	12
DSE-14-E6	Concurrent and Distributed Systems	4 / 0 / 0 / 4	12
DSE-14-E7	Software Fault Tolerance	2 / 2 / 2 / 4	15
DSE-14-E8	Microkernel-based Operating Systems	2 / 1	6
DSE-14-E9	Real-Time Systems	2 / 1	6
DSE-14-E10	Application Development for M&U Computing	/ 2	6
DSE-14-E11	Principles of Dependable Systems	/ 2	9
DSE-14-E12	Foundations of Computational Logic	/ 4	9
DSE-14-E13	Advanced Topics in Systems Architecture	2 / 0	3
DSE-14-E14	Advanced Topics in Distributed Systems	2 / 2	6

Curriculum: Intended Schedule



Semester	DSE-M1	DSE-M2	DSE-M3	DSE-M4	DSE-Int	DSE-E1	DSE-E2	DSE-E3	DSE-E4	DSE-E5	DSE-E6	DSE-E7	DSE-E8	DSE-E9	DSE-E10	DSE-E11	DSE-E12	DSE-E13	DSE-E14	Master Thesis	CP
1st	♦	♦	♦	♦																	30
2nd						◊	◊	◊	◊	◊	◊	◊				◊					30
3rd					♦							◊	◊	◊	◊	◊	◊	◊	◊		30
4th																				♦	30
	42					48														30	120

Curriculum: Let's Start!

All mandatory lectures are offered this semester!

DSE-M1

— Systems Engineering I	Prof. Fetzer
— Systems Engineering II	Prof. Fetzer

DSE-M2

— Mobile Communication and Mobile Computing	Prof. Schill, Dr. Springer
— Distributed Systems	Prof. Schill, Dr. Springer

DSE-M3

— Security and Cryptography I	Dr. Köpsell
— Transactional Information Systems	Prof. Lehner

DSE-M4

— Design-Patterns and Frameworks	Dr. Götz

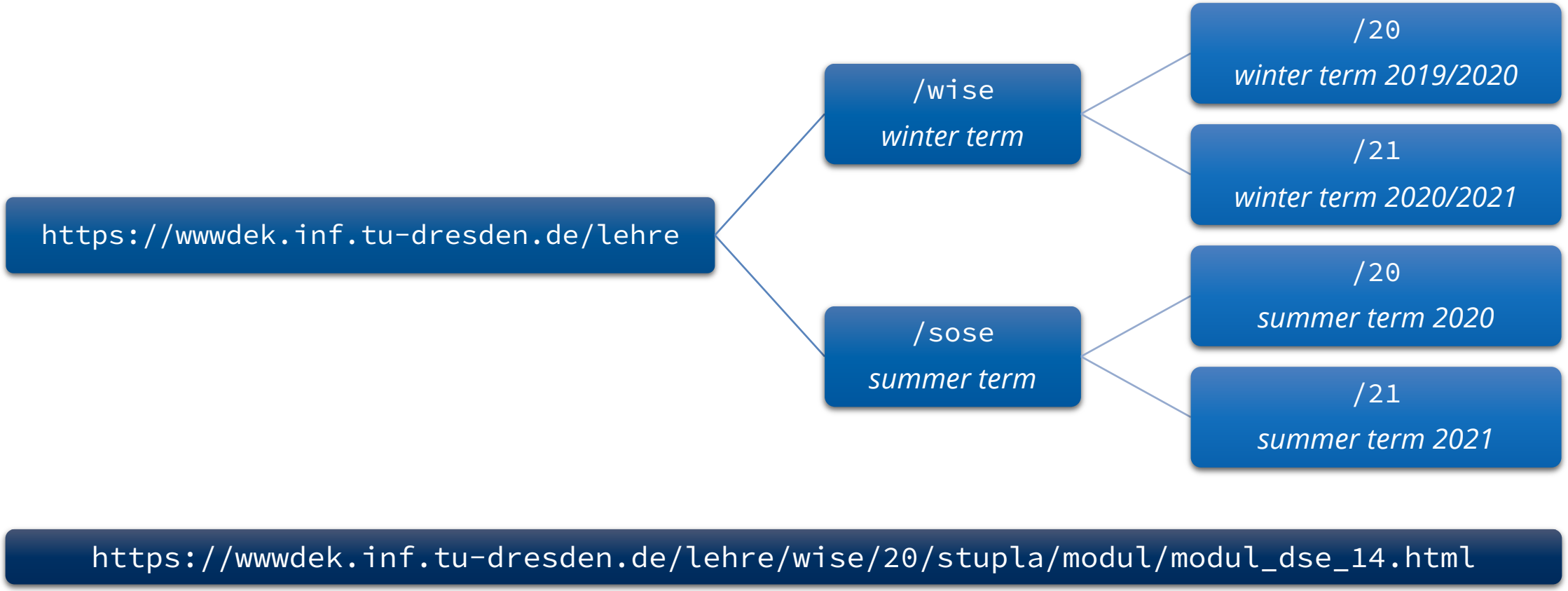
Your Timetable for this Semester

Complete time table incl. elective modules:
https://wwwdek.inf.tu-dresden.de/lehre/wise/20/stupla/modul/modul_dse_14.html

Time	Monday	Tuesday	Wednesday	Thursday	Friday
7.30 - 9.00: no lectures					
9.20 - 10.50		Tutorial **Distributed Systems** APB/E023		Lecture **Security and Cryptography I** APB/E023	
11.10 - 12.40	Lecture **Systems Engineering I** APB/E023	Tutorial **Systems Engineering II** APB/E007		Lecture **Security and Cryptography I** APB/E023	Tutorial **Systems Engineering I** APB/E023
13.00 - 14.30	Lecture **Transactional Information Systems** APB/E010	Tutorial **Transactional Information Systems** APB/E001		Lecture **Mobile Communication and Mobile Computing** APB/E023	
14.50 - 16.20	Lecture **Systems Engineering II** APB/E007	Lecture **Design Patterns and Frameworks** APB/E023	Tutorial **Design Patterns and Frameworks** HSZ/0101 or WIL/C129	Lecture **Distributed Systems** APB/E023	
16.40 – 18.10: no lectures					

General Notes

Your Timetable for Other Semesters



https://wwwdek.inf.tu-dresden.de/lehre/wise/20/stupla/modul/modul_dse_14.html

General Timetable

Winter Semester (winter term)
- October till January
- Exams (written) in February
- Exams (orally) mainly in February / March

Summer Semester (summer term)
- April till July
- Exams (written) in August
- Exams (orally) mainly in August / September

Pay attention to holidays, et cetera!

https://www.tu-dresden.de/studium/im-studium/studienorganisation/studienjahresablauf

Lectures, Seminars, Placements, etc. take place Monday through Friday

DS	From	To
1	07:30 (am)	09:00 (am)
2	09:20 (am)	10:50 (am)
3	11:10 (am)	12:40 (pm)
4	13:00 (01:00 pm)	14:30 (02:30 pm)
5	14:50 (02:50 pm)	16:20 (04:20 pm)
6	16:40 (04:40 pm)	18:10 (06:10 pm)
7	18:30 (06:30 pm)	20:00 (08:00 pm)

Terminology: Semesterwochenstunde (SWS)

SWS **Semesterwochenstunde** (Semester Weekly Hour)

1 SWS equals to 1 weekly 45-minute session for 15 weeks (additional 45 minutes of weekly outwork)

usually given for lectures, tutorials, [seminars,] and placements (L/T[/S]/P or German: V/Ü[/S]/P)

e.g.: Systems Engineering I – 2/2/- or 2/2/0

weekly 90-minute lecture,

weekly 90-minute tutorial,

no placement

Slots are **always 90 minutes** (so, double periods)!

Uneven SWS mean fortnightly sessions. Pay attention to the week numbers (even/uneven).

October 14, 2019 is in an uneven week (41st week of the year).

Exams

Enrolment

Some offered lectures, tutorials and placements **require** mandatory **enrolment already to participate**.

- Please check the corresponding lecturer's website for details.
- A common tool for lecture / seminar / etc. enrolment is jExam: www.jexam.de

Most of the offered lectures, tutorials and placements require **mandatory enrolment in the corresponding exams**.

- **Please consult SCIS for enrolments.**

Service Centre for International Students

Examination Office for DSE students

- registration to examinations
- administration of exam results
- announces the grades
- issues transcripts of records and confirmation documents

Room: APB 2018

Hours: Tuesday & Wednesday, 9:00-12:00

E-Mail: infscis.dse@mailbox.tu-dresden.de

Web: https://www.inf.tu-dresden.de/index.php?node_id=2728&ln=en

Always bring ID and matriculation certificate! Student ID alone is insufficient.

Exams

Taken either as written or oral exam. *Refer to module description or ask lecturer!*

register **in person** at SCIS
- during the registration period (written exam)
- latest two weeks prior to exam (oral exam)

for oral exams:
- ask examiner for available appointments
- go to SCIS and register for the exam
- present SCIS paper-work to examiner and make the actual exam appointment

cancellation is possible up until
- 3 days **before** written examinations
- 2 weeks **before** oral examinations

after cancellation deadline, you must present a sickness certificate to the SCIS issued on the day of examination or before stating you were unable to take the exam

Exams: What happens if you fail?

Keep calm!

you may repeat a failed exam twice
- first repetition within one year
- second repetition at the next possible date
- only after three failed attempts you will drop out

in case of a second repetition: consult the SCIS immediately!

you may present a sickness certificate if you were sick during an exam, nullifying the failed attempt (needs to be hand-in within three days after the exam)

Careful, you will automatically receive a non-passing grade (5,0) in case of
- failure to register for repetition in due time
- no-show without sickness certificate or very good reason (flood, tornado, earthquake, ...)

Beware!

Don’t procrastinate!

- **Plan your study!**
  The first and last semester are predefined, the others are up to you!
  Use the first term to carefully read the study regulations and choose your modules.
- Contact the Academic Advisory Service better sooner than later.
- Enrol for exams on time. *Check the SCIS website for respective announcements.*
- Take your exams on time. *For instance, take DSE-M1 this winter term, as it is scheduled like this.*
- Consult the SCIS in case of a second failed attempt immediately!
- Do not start to write your master’s thesis too late! You’ll receive a non-passing grade if you do not start in time!

Academic Advisory Services & Help

Academic Advisory Services

Dr.-Ing. Irina Karadschow
Dr.-Ing. André Martin
Dr.-Ing. Markus Wutzler

dse-info@mailbox.tu-dresden.de

Office Hours:
— check the websites

In any case: write an e-mail first!

Service Centre for International Students

Julia Koppenhagen

Room APB 2018
infscis.dse@mailbox.tu-dresden.de
+49-351-463-39240

Office Hours:
— Tuesday, 9-12 am
— Wednesday, 9-12 am

Check SCIS website regularly!

Important Contacts

Prof. Christof Fetzer

Chair of Systems Engineering

Head of DSE Programme

— Room APB 3104

— christof.fetzer@tu-dresden.de

Prof. Alexander Schill

Chair of Computer Networks

Chairman of the Examination Board

— Room APB 3111

— alexander.schill@tu-dresden.de

responsible for application of

— deadline extensions (especially for thesis submission deadline)

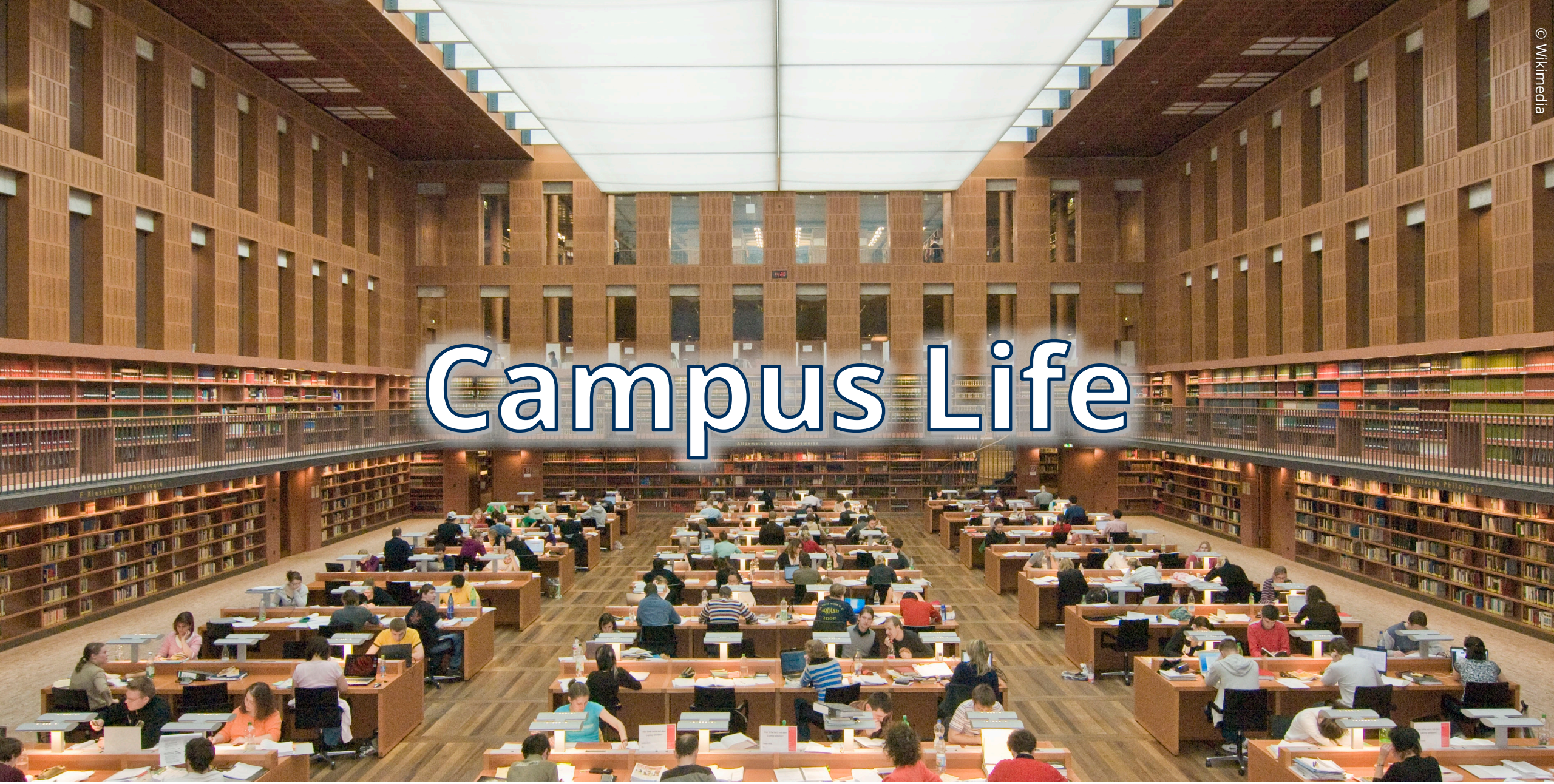
— approval of (external) programme achievements

Good to know!

Mailing-List (inf-dse-2019@groups.tu-dresden.de)
- register at https://mailman.zih.tu-dresden.de/groups/listinfo/inf-dse-2019
- important information and news (especially from SCIS)
- ask questions and engage in discussions

International Office
- provides help with all kinds of problems (VISA, government, dormitory, ...)
- good community for international exchange

Re-registration
- re-register with the matriculation office every semester
- pay the semester contribution on time
- without re-registration you will automatically drop-out



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SLUB – Saxonian State and University Library

Central Library (main building):
- Zellescher Weg 18 (#47a on TUD map)

Departmental Library (‘DrePunct’ building):
- Zellescher Weg 17 (#47c on TUD map)

registration with
- online form in advance
- matriculation certificate
- passport

service is free for registered students

http://www.slub-dresden.de

IT Services provided by ZIH

E-Mail

- E-mail address on semester print-out sheet; in general: firstname(s).lastname(s)@mailbox.tu-dresden.de
- comes with Microsoft Exchange access
- make sure to set-up account with your mail programme, or set-up a forward (instructions on ZIH website), and check the inbox regularly
- **important messages from the university are sent to this address only**
  'I did not receive the E-Mail' is not a valid excuse if you miss an exam, et cetera!

Computer Labs (ground level, west wing)

- personal login and first password on semester print-out sheet
- operating hours of computer labs
- weekdays: 7a till 9:30p
- weekend: 10a till 5:30p

WLAN access (eduroam)

- you can use your login also for WLAN access on the campus
- and at every institution which joined the eduroam network (worldwide)

Refectories: Breakfast, Lunch & Dinner

You can pay with EC-card or cash, but E*meal* is the convenient choice.

- — without E*meal* you must show your student ID with each purchase in order to receive student discounts!
- — deposit of 5 EUR
- — registration with
- ✓ passport
- ✓ student ID
- ✓ Emeal certificate *(on semester print-out sheet)*
- — several refectories at main campus
  nearest one:
  Alte Mensa – Mommsenstraße
  (#24a on TUD map)

Extra-curricular Activities

Information around study and living
- https://www.study-dresden.com

Cultural Office (International Office, TUD)
- excursions, events, meet people
- https://tu-dresden.de/studium/rund-ums-studium/kulturbuero

Sports (University Sports Center)
- registration online
  (starts next Tuesday, 9 October)
- http://tu-dresden.de/usz
- small fee per semester

Buddy Program
- https://www.aegee-dresden.org/buddy/

WELCOME CITY TOUR ON A DVB TRAM

When?
- Saturday, October 19th, 11am

Who?
- Cultural Office, DVB and the students of the Faculty of Transportation and Traffic Sciences

What?
- discover Dresden on a special tram journey
- ride around various parts of the city and show you several sights and POIs.
- personal insights and tips about places to go to and things to do during the winter term
- after the city tour, possibility to go with the tram to the depot and have a look around.

How much?
- free

Tickets?
- at the Cultural Office, during office hours
- during the Matriculation Ceremony, on Thursday, October 4th.

www.tu-dresden.de/kultur
www.facebook.com/kulturbuero
www.twitter.com/kultur_TUD

German Courses

VHS Basic Course, Level A1

- http://www.vhs-dresden.de/?id=189
- Adult Education Centre Dresden

TUDIAS Basic Course, Level A1

- course fee: starting at 400€ excl. learning material
- next start in January; 80 teaching units; twice per week (5p till 8:15p; 8h per week)
- online registration:
  http://www.tudias.de/deutsch-als-fremdsprache/abendkurse/

TU Dresden – Language Courses for Students

- free courses* for foreign students provided by subdivision of TUDIAS
- you (should) have 4 SWS free budget to attend a language course
- http://sprachausbildung.tu-dresden.de/templates/tyKursuebersicht.php?topic=spa_kursangebot&sprache=37
- http://lskonline.tu-dresden.de/lskonline/de/100.0

Thank you.
Questions?