KTH Royal Institute of Technology

Master's and PhD studies

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KTH web site **Facts about KTH** **Study at KTH**

KTH Royal Institute of Technology

One of the top technical universities in Europe

Short facts about KTH

- Established 1827 in Stockholm, Sweden
- People from more than one hundred nations
- Some numbers:
  - 14,000 full time students
  - 1,500 PhD students (with at least 50% activity)
  - 2,900 new students in master programs (in 2024)
  - 300 new PhD students each year
  - 600 members of faculty
  - QS ranking in 2025 is 78, Times Higher Education 95
  - Highest QS subject rankings is 25 for Mechanical Engineering, and many other subject rankings are better than 100

Engineering and Science rankings

Comparison of QS rankings by subject 2025		
	KTH	ZJU
General ranking	**78**	**49**
Mechanical Engineering	25	28
Materials Science	29	23
Electrical and Electronic Engineering	33	25
Architecture & Built Environment	42	43
Civil and Structural Engineering	43	21
Physics and Astronomy	54	60
Chemical Engineering	60	18
Computer Science and Information Systems	69	31
Mathematics	70	43
Chemistry	80	19
Data Science and Artificial Intelligence	51-100	-
Yellow shading: higher rank than KTH		
Red shading: lower rank than KTH		

The Kingdom of Sweden

- About 10 million inhabitants, ~2 million of whom live in the capital of Stockholm
- Has a pleasant climate thanks to the warm Gulf stream in the north Atlantic sea
- Combines a beautiful natural setting with modern technology and vibrant cities
- Home of the Nobel Prize, and many famous export companies, such as the examples on the next slide:

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Sweden makes a lasting impression

Swedish entrepreneurship and ingenuity has helped shape the worlds of communication, furniture, fashion, music and much more. And no matter what the industry, there always seems to be that engineering approach.

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Stockholm – a city of islands

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Stockholm: a dynamic environment, modern, historic, clean air and water

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Stockholm: an international city

- A multi-cultural European capital, communities from China, India and other countries
- A city with very clean air and water
- Quick access to city, campus and nature with excellent transportation: public, by bicycle or even by boat
- **Swedes speak good English**, very limited need to learn Swedish while studying in Stockholm


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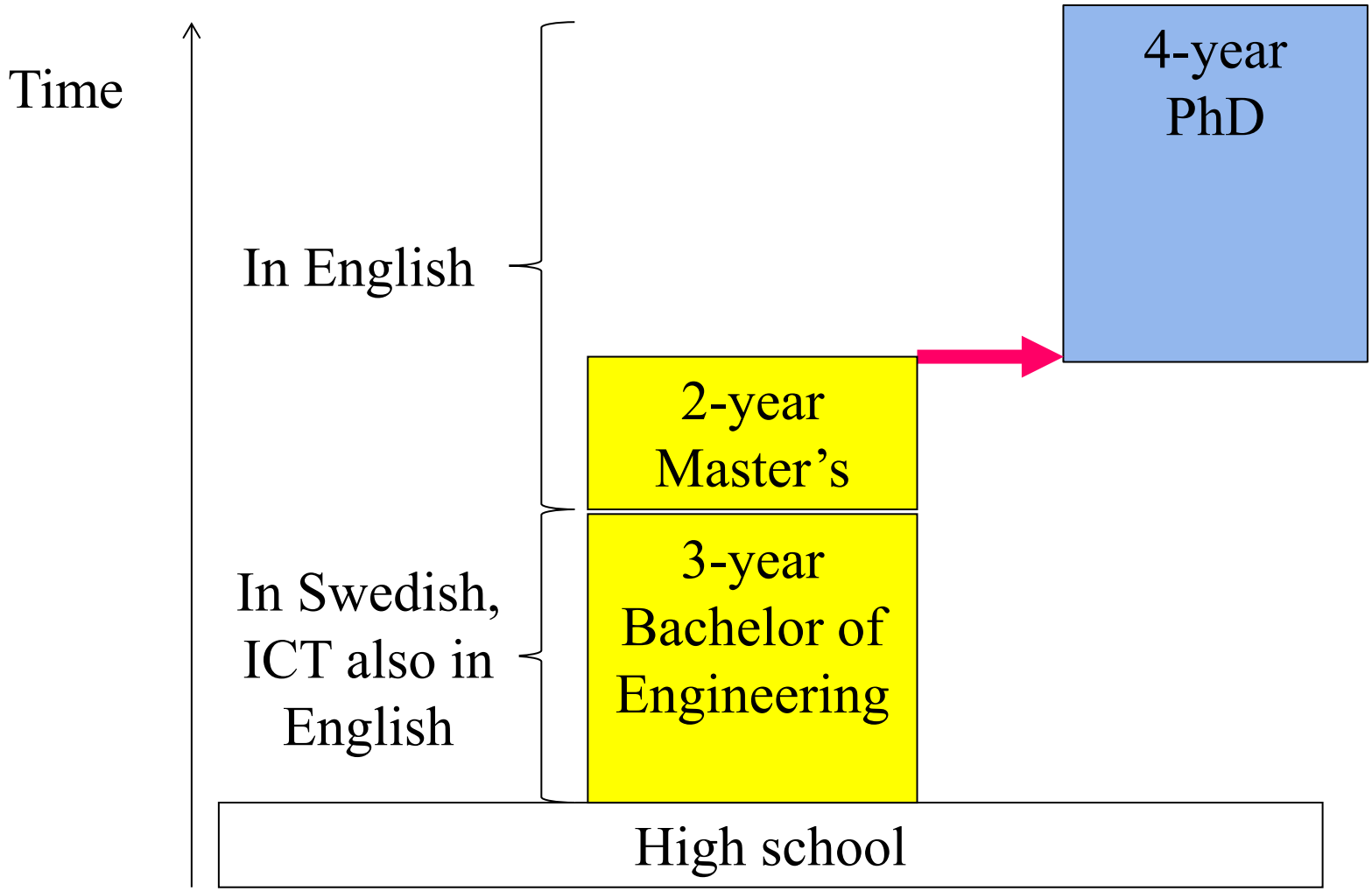
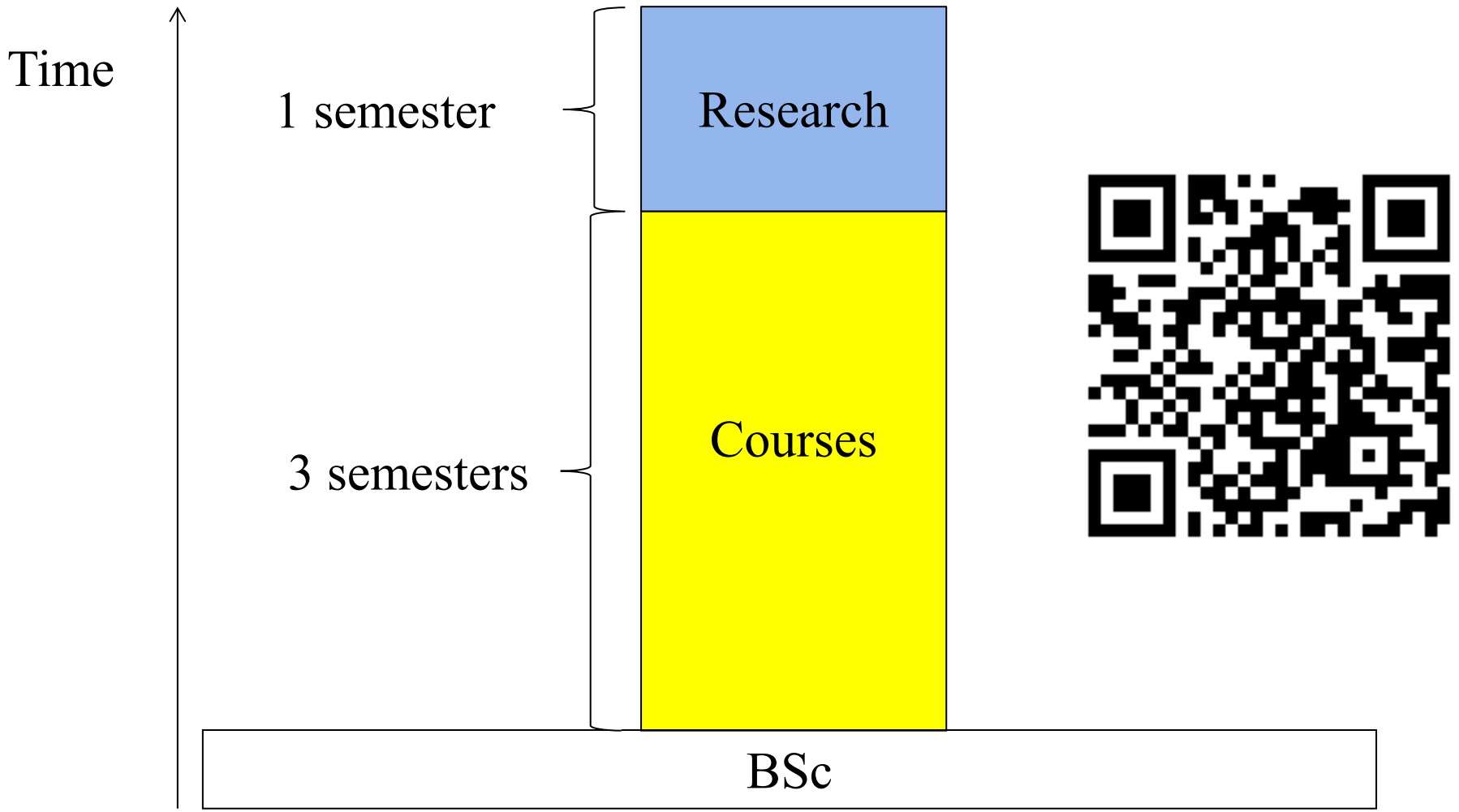
Stockholm student life, part of the city

KTH main campus

Structure of education at KTH



Structure of MSc education at KTH



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MSc programmes for entry in 2026

More than 60 programmes in several subject areas:

- Architecture and the Built Environment
- Computer Science
- Electrical Engineering
- Engineering Physics and Mathematics
- Energy and Sustainable Development
- Industrial Management and Innovation
- Information and Communication Technology
- Life Science Technology, Chemistry and Chemical Engineering
- Materials Science and Engineering
- Mechanical Engineering

Fees and Scholarships

There are application and tuition fees for non-EU/EEA/Swiss citizens for 1st and 2nd cycle studies (bachelor and master)

The tuition fee is SEK180k (about RMB133k*) for one year of full-time master's study, architecture 70% higher and bachelor 20% lower

Scholarships are available, for example:

- KTH Scholarship (covering the tuition fee), very competitive: 7% of applicants got offers in 2024
- Joint programs: Erasmus Mundus and EIT (European Institute of Innovation and Technology)

* Assuming exchange rate RMB 1.0 = SEK 1.35

Living in Sweden

When applying for a residence permit, you must prove to the Swedish Migration Board that you will have a guaranteed sum of money at your disposal throughout the entire period of your studies. The amount is SEK 10584*, about RMB 7800**, per month for ten months of the year.

Student budget examples

Breakdown of budget per month, approximately:

- Food: RMB 2000
- Accommodation: RMB 3500 (for 19m^2)
- Local travel: RMB 500
- Phone/internet: RMB 500
- Other: RMB 1300

* This sum was valid on 1 January 2025, subject to changes
** Assuming exchange rate RMB 1.0 = SEK 1.35

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Application requirements and process

- Completed Bachelor's degree is required except for 3+2 applicants, see following slides for terms
- English proficiency has to be shown (TOEFL 90 with writing 20, IELTS 6.5 with no subscore below 5.5 etc)
- There are programme-specific requirements (see www.kth.se/en/studies/master)
- Apply at www.universityadmissions.se
- Online application period: October 16 to January 15, supporting document deadline 2 February
- Results of admission distributed March 26, 2026

Dual-degree master's programmes: two degrees from KTH and ZJU

Study one year at KTH and the remaining part at ZJU

Tuition fees at KTH are waived

Subjects:

- Energy Engineering since 2016
- Optical Engineering from 2021

Contact your study administration for application instructions and program details

Application for KTH scholarship

- Applications for KTH scholarships are open from

1 December 2025, to 15 January 2026

- Applications are entered via the KTH web page:
  - Go to master studies: www.kth.se/en/studies/master/
  - Select “Scholarships” in the left menu and then “KTH scholarship”
- Scholarship opportunities:

KTH Scholarship:

Application for KTH scholarship

An assessment of applicants for the scholarship is made based on the following criteria:

- The applicant's grades (GPA or equivalent)
- The ranking of the university where the applicant studied at bachelor level
- The applicant's extracurricular research experiences or publications, relevant work experience, relevant teaching experience, awards from competitions and extracurricular activities.
- The applicant’s motivation how they will contribute to the sustainable development goals with a master’s degree from KTH

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Application for KTH scholarship

- Sustainable development goals

Application for KTH scholarship

- The motivation on sustainable development should at least show that the applicant has read the information on sustainability found in each master program description on the KTH web site. Example from a program: (scroll down to “Sustainable development”):

- Do NOT copy&paste from anything on the web! The motivation will be checked for plagiarism.

Compliance with entry requirements

Include a table of this type in your application, including what courses you will take during the spring before reaching KTH, example for KTH master program in Engineering Physics:

KTH master program prerequisites, see ”Entry requirements”	**Corresponding bachelor level courses at your home university**
Physics (including classical mechanics, thermodynamics, electromagnetism, waves, geometrical optics and quantum mechanics) equivalent to at least 45 ECTS	List courses and briefly describe contents
Mathematics (including differential and integral calculus, linear algebra, differential equations and transforms, and statistics) equivalent to at least 35 ECTS	List courses and briefly describe contents

60 ECTS credits is one full academic year of studies. At bachelor level, the credits from a Chinese university can usually be multiplied by 1,5 to get the corresponding number of ECTS credits, i.e. 1 credit at a Chinese university corresponds to approximately 1,5 ECTS credits

ECTS= European Credit Transfer System

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Compliance with entry requirements

Example of a table to be included when applying for KTH Computer Science:

KTH master program prerequisites, see "Entry requirements"	**Corresponding bachelor level courses at your home university**
Mathematics equivalent to at least 28,5 ECTS, there must be: 1. a course in one-variable calculus, 2. a course in linear algebra and 3. a course in probability theory and statistics 4. a course in discrete structures	List courses and briefly describe contents: 1. ... 2. ... 3. ... 4. ...
Computer Science/Information Technology equivalent to at least 22,5 ECTS, there must be 1. a course in object-oriented programming, 2. a course in algorithms and data structures 3. a course in computational complexity	List courses and briefly describe contents: 1. ... 2. ... 3. ...
Multivariable analysis is a special eligibility requirement for compulsory courses within the tracks Data analysis and Cognitive systems.	State course(s) and brief description
Human-computer interaction is a special entry requirement for compulsory courses within the Interaction Design track	State course(s) and brief description

60 ECTS credits is one full academic year of studies.
ECTS= European Credit Transfer System

Acceptance rates

All numbers are available on the KTH website

Average acceptance rate for all master programs in 2025: 29%

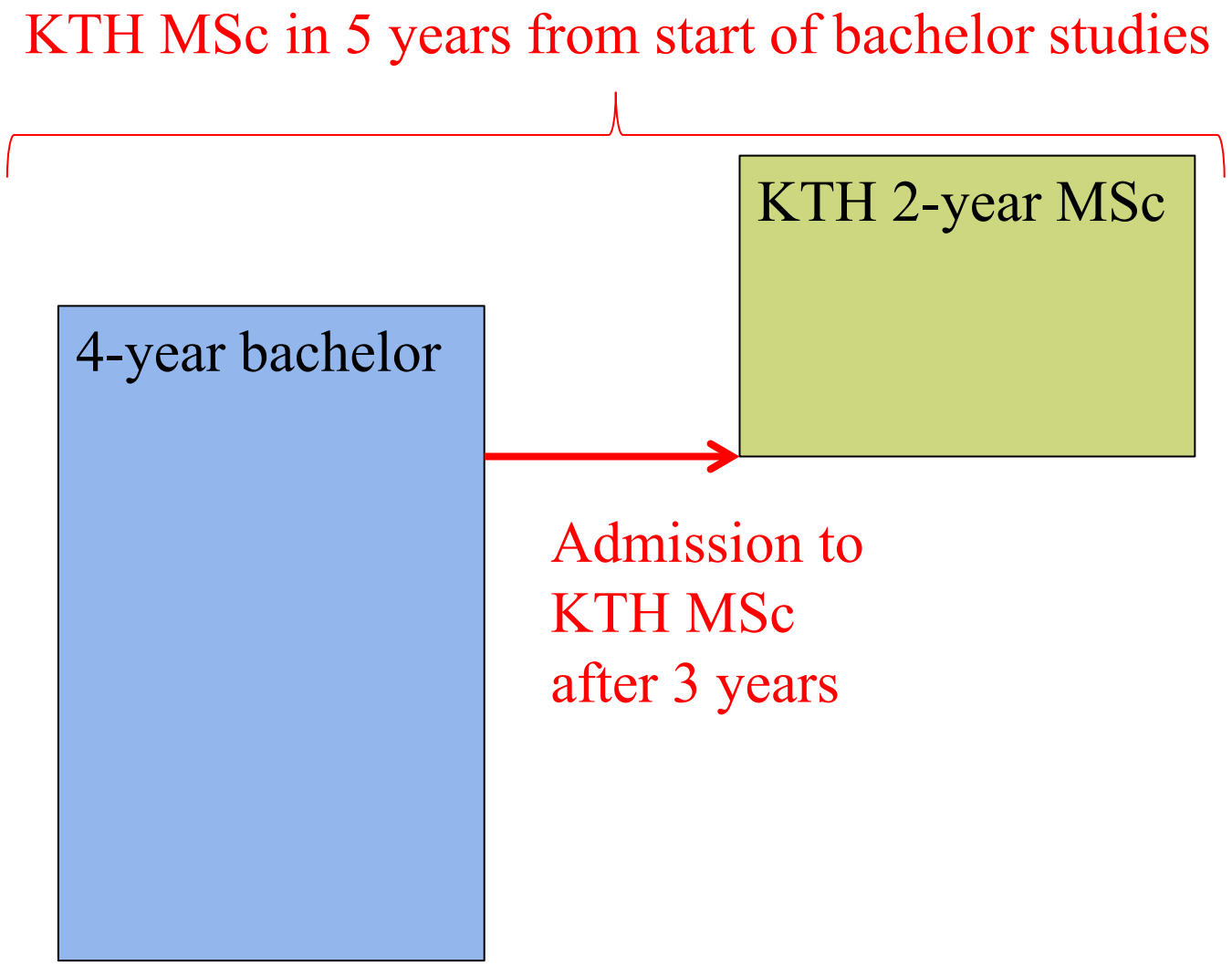
Most popular master programs 2025 (~10% or less)

- ICT Innovation: 5-11% depending on track
- Computer Science: 10%
- Systems, Control and Robotics: 9%
- Cybersecurity: 8%
- Applied and Computational Mathematics: 8%
- Machine Learning: 7%

Easier programs to be admitted to (≥50%)

- Technology, Work and Health: 75%
- Chemical Engineering for Energy and Environment: 73%
- Macromolecular Materials: 62%
- Nanotechnology: 61%
- Innovative Technology for Healthy Living: 60%
- Molecular Science and Engineering: 57%
- Sports Technology: 57%
- Industrial and Environmental Biotechnology: 55%

3+2 agreement



3+2 agreement

KTH and ZJU have a very successful 3+2 agreement since 2012

Students can apply during the 3rd year of 4-year bachelor studies. These applicants **must contact their home university administration**

Applicants **should very carefully check the entry requirements for each master program** to which they apply.

Joint programs and programs at other Swedish universities are NOT included in 3+2.

Applications are made at universityadmissions.se as for all applications, deadline January 15, 2026

ZJU – KTH 3+2 mapping
Recommended transitions

ZJU School of Biomedical Engineering and Instrument Science, major: Biomedical Engineering	KTH Medical Engineering
ZJU College of Biosystems Eng. & Food Science, major: Bioengineering	KTH Sustainable Technology KTH Industrial and Environmental Biotechnology KTH Medical Biotechnology
ZJU College of Chemical and Biological Engineering, major: Chemical Engineering and Technology	KTH Sustainable Technology KTH Chemical Engineering for Energy and Environment KTH Macromolecular Materials KTH Molecular Science and Engineering KTH Nanotechnology
ZJU College of Chemical and Biological Engineering, major: Pharmaceutical Engineering	KTH Sustainable Technology
ZJU College of Civil Engineering & Architecture, major: Civil Engineering	KTH Civil and Architectural Engineering KTH Real Estate and Construction Management (Students must have completed Engineering Economics, 2 credits; Engineering Project Management, 2 credits; Real Estate Economics and Evaluation, 2 credits; Civil Engineering Construction 3 credits or equivalent) KTH Environmental Engineering and Sustainable Infrastructure KTH Sustainable Technology KTH Transport and Geoinformation Technology KTH Engineering Mechanics

ZJU – KTH 3+2 mapping
Recommended transitions

ZJU College of Computer Science & Technology, major: Computer Science and Technology	KTH Transport and Geoinformation Technology KTH Communication Systems KTH Computer Science KTH Embedded Systems KTH Interactive Media Technology
ZJU College of Control Science and Engineering, major: Automation	KTH Electric Power Engineering KTH Engineering Design (students only eligible for track Mechatronics) KTH Systems, Control and Robotics KTH Information and Network Engineering (students must have completed courses in Signals & Systems, Digital Signal Processing and Fundamentals of Programming)
ZJU College of Electrical Engineering, major: Automation	KTH Electromagnetics, Fusion and Space Engineering (Eligibility depending on student's course selection, see prerequisites of the master program at www.kth.se) KTH Electric Power Engineering KTH Embedded Systems
ZJU College of Electrical Engineering, major: Electrical Engineering and its Automation	KTH Embedded Systems
ZJU College of Electrical Engineering, major: Electronic Information Engineering	KTH Nanotechnology KTH Information and Network Engineering (students must have completed a course in Fundamentals of Programming) KTH Communication Systems KTH Embedded Systems

ZJU – KTH 3+2 mapping
Recommended transitions

ZJU College of Energy Engineering, major: Energy and Environmental System Engineering	KTH Sustainable Technology KTH Electromagnetics, Fusion and Space Engineering (Eligibility depending on student's course selection) KTH Sustainable Energy Engineering
ZJU College of Energy Engineering, major: Mechanical Design, Manufacturing and Automation	KTH Sustainable Energy Engineering KTH Production Engineering and Management KTH Engineering Design KTH Integrated Product Design KTH Vehicle Engineering KTH Engineering Mechanics (Students only eligible for track Fluid Mechanics)
ZJU College of Energy Engineering, major: Renewable Energy Science and Engineering	KTH Sustainable Technology KTH Electromagnetics, Fusion and Space Engineering (Eligibility depending on student's course selection) KTH Sustainable Energy Engineering
ZJU College of Energy Engineering, major Vehicle Engineering	KTH Production Engineering and Management KTH Engineering Design KTH Integrated Product Design (students ony eligble to track: Innovation Management and Product Development-IPDE) KTH Engineering Mechanics

ZJU – KTH 3+2 mapping
Recommended transitions

ZJU College of Information Science and Electronic Engineering, major: Electronic Science and Technology	KTH Communication Systems KTH Electric Power Engineering KTH Embedded Systems KTH Information and Network Engineering KTH Engineering Mechanics
ZJU College of Information Science and Electronic Engineering, major: Information Engineering	KTH Information and Network Engineering KTH Communication Systems KTH Embedded Systems
ZJU College of Information Science and Electronic Engineering, major: Microelectronic Science and Engineering	KTH Embedded Systems/Inbyggda system (Students only eligble to tracks Embedded Platform/Embedded Electronics & SoC Design) KTH Nanotechnology
ZJU School of Material Science and Engineering, major: Material Science and Engineering	KTH Nanotechnology KTH Engineering Materials Science
ZJU College of Mechanical Engineering, major: Industrial Engineering	KTH Engineering Design KTH Production Engineering and Management

ZJU – KTH 3+2 mapping
Recommended transitions

ZJU College of Mechanical Engineering, major: Mechatronics Engineering	KTH Engineering Design (Students only eligible for track Mechatronics) KTH Integrated Product Design (Students only eligible to track: Innovation Management and Product Development-IPDE) KTH Production Engineering and Management KTH Embedded Systems
ZJU Ocean College, major: Marine Science	KTH Sustainable Technology
ZJU Ocean College, major: Ocean Engineering and Technology	KTH Sustainable Technology
ZJU College of Optical Science and Engineering, major: Opto-Electronics Information Science and Engineering	KTH Engineering Physics (Students eligible if elective courses in Electromagnetic Field & Waves and Quantum Optics: Fundaments and Applications have been taken at ZJU) KTH Nanotechnology
ZJU Department of Polymer Science and Engineering, major: Macromolecular Materials and Engineering	KTH Sustainable Technology KTH Macromolecular Materials KTH Nanotechnology

Examples of ZJU 3+2 applicants admitted to KTH in 2025

Stated ZJU bachelor major	KTH master program
Automation, College of Electrical Engineering	Systems, Control and Robotics
Computer Science and Technology	Computer Science
Electrical Engineering and its Automation	Electric Power Engineering
Energy and Environmental System Engineering	Sustainable Energy Engineering
Geographic Information Science	Transport and Geoinformation Technology
Materials Science and Engineering	Nanotechnology
Mechanical Engineering	Mechatronics
Microelectronic Science and Engineering	Embedded Systems
Process Equipment and Control Engineering	Sustainable Energy Engineering
Robotics Engineering	Embedded Systems

Note: 3+2 applications are in full competition. Admission is not guaranteed and will depend on the strength of each application in terms of grades, elective courses etc. The entry requirements of each master program must always be fulfilled for applications to be considered eligible for admission.

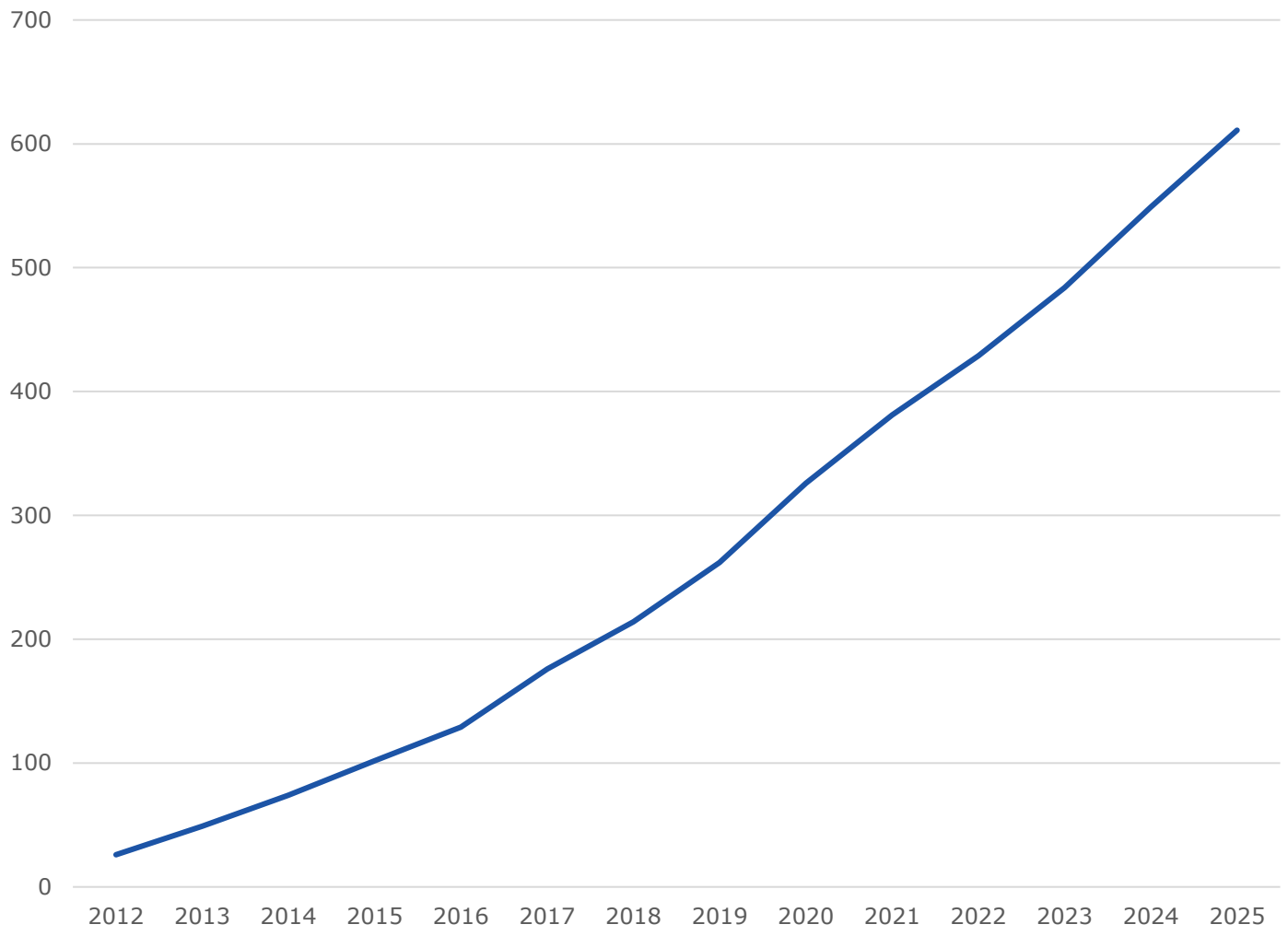
Comments on 3+2 applications

Most 3+2 applicants will see the status "unqualified" in universityadmissions.se during the admissions process: **Ignore this!** It usually only means that your transcripts indicate that you will not have a bachelor degree before entering KTH. If your name is on the list KTH has received from your bachelor university, KTH will mark your 3+2 application so that it is processed anyway.

Instead check carefully that you have uploaded all documents that are compulsory for each master program for which you are applying before February 2.

Do not wait until the last day to start uploading documents! Something may go wrong and then your application is considered LATE and is only evaluated if there is time left at the end of the evaluations. That is unusual since each master program may receive more than 1000 applications.

KTH 3+2 master students from China and India



Registered students, in total 611 until 2025,
58 of these were from ZJU

Languages: English or Swedish?

- **Good knowledge of English is fundamental** for successful education at KTH
- Sweden has a local language but there is **very limited need to learn Swedish** when studying since people in Sweden speak good English
- All KTH students who do not have Swedish as their first language are invited to an introductory course in Swedish language and culture. The course is free of charge for all students
- **Good advice: focus on English in the beginning!**

Career prospects after a KTH degree

- Statistics for master's programmes:
  - 50% had a job even before graduation
  - >90% had a job within 6 months of graduation
  - >30% became PhD students

PhD studies

- Three years of full-time research, one year of courses
- Engages around 2,000 people
- A large proportion international PhD students
- A candidate has to apply for a position
- All PhD student positions are announced on the KTH web site:

https://www.kth.se/en/studies/phd

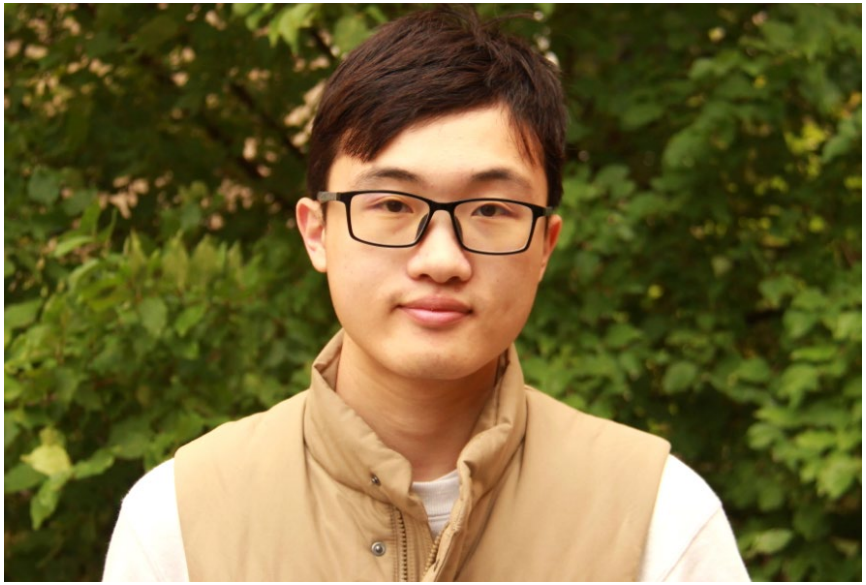
- Employment with a salary if admitted, but competition for positions

Things you can do after finishing education at KTH…

Thermal design engineer at Zhejiang Dahua Technology Co. Ltd, China, 2018

- Master in Sustainable Energy Engineering KTH, Sweden, 2017
- Bachelor in Energy and Environment System Engineering (KTH-ZJU 3+2) Zhejiang University, 2016

Things you can do after finishing education at KTH…



- Employed at IT company in Sweden
- KTH master program in Communication Systems, KTH-HUST 3+2 Program, KTH Scholarship holder, 2018-2020
- Bachelor: HUST, Telecommunications Engineering, ranked #1 of 200 students

Things you can do after finishing education at KTH…

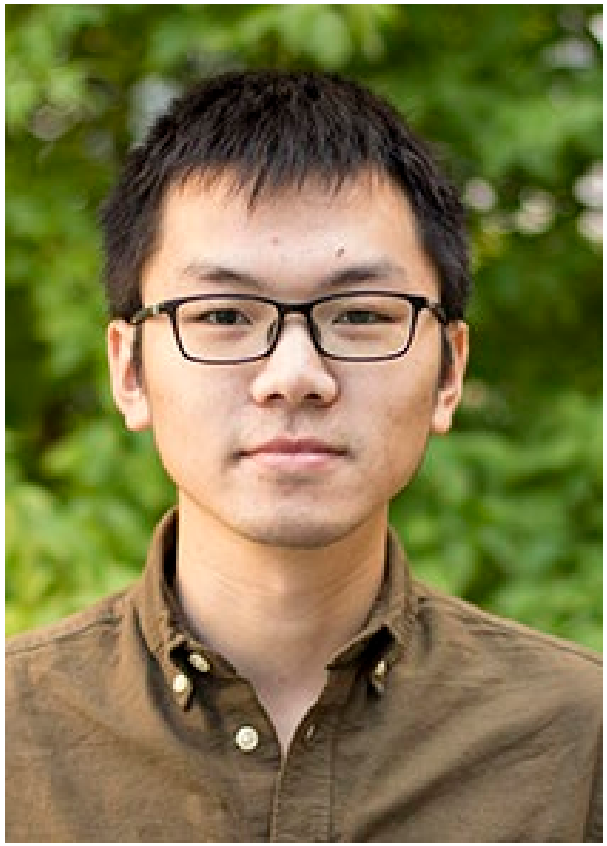
- PhD student in Data Science, at KTH, 2021
- Master in Communication Systems, at KTH, 2020 (KTH-HUST 3+2)
- Bachelor in Information Technology, at Huazhong University of Science and Technology

Things you can do after finishing education at KTH…

Ph.D. candidate Chemistry, KTH Royal Institute of Technology, 2020-current

- Process Engineer, PVD Division, Beijing NAURA Microelectronics Equipment Co. Ltd., 2018-2019
- Molecular Science and Engineering, Master of Science, KTH, 2015-2017
- Chemistry, Bachelor of Science, Southeast University, 2011-2015

Things you can do after finishing education at KTH…



- PhD candidate in systems and networking at University of Pennsylvania, USA
- Wireless Systems (Now Information and Network Engineering), Master of Science, KTH, 2016-2018
- Automatic Control, Bachelor of Engineering, Zhejiang University, 2013-2017 (KTH-ZJU 3+2)

Things you can do after finishing education at KTH…

Consultant, Ramboll Energy, Singapore

- Ph.D. in Thermal Energy Storage
  Nanyang Technological University,
  Singapore, 2020
- MSc in Sustainable Energy Engineering,
  KTH, Sweden, 2013
- BEng in Energy Engineering,
  Zhejiang University, China, 2011

Things you can do after research at KTH…

Professor & Vice Dean
School of Energy Engineering
Zhejiang University

- Postdoc in Energy Technology, KTH, 2009
- PhD in Engineering Thermal Physics, ZJU, 2005
- Bachelor & Master in Thermal Engineering ZJU, 1995 & 2000

Things you can do after finishing education at KTH... go into space!

Professor Christer Fuglesang
Professor in Space Physics, KTH

- Mission crew STS-116 & STS-128 Shuttle Discovery, NASA-ESA 2006 & 2009
- Astronaut at European Space Agency 1992-present

- PhD in Experimental Particle Physics Stockholm University, 1986
- Master in Engineering Physics KTH, 1981

Things you can do after research at KTH… collect the Nobel prize!

Professor Hannes Alfvén

- Nobel Prize in Physics, 1970
  for Magnetohydrodynamics
- Professor in Electrical Engineering
  University of California, 1967-1991
- Professor in Electromagnetic Theory
  and Electrical Measurements
  KTH, 1940-1991
- PhD in Electromagnetic Waves
  Uppsala University, 1934

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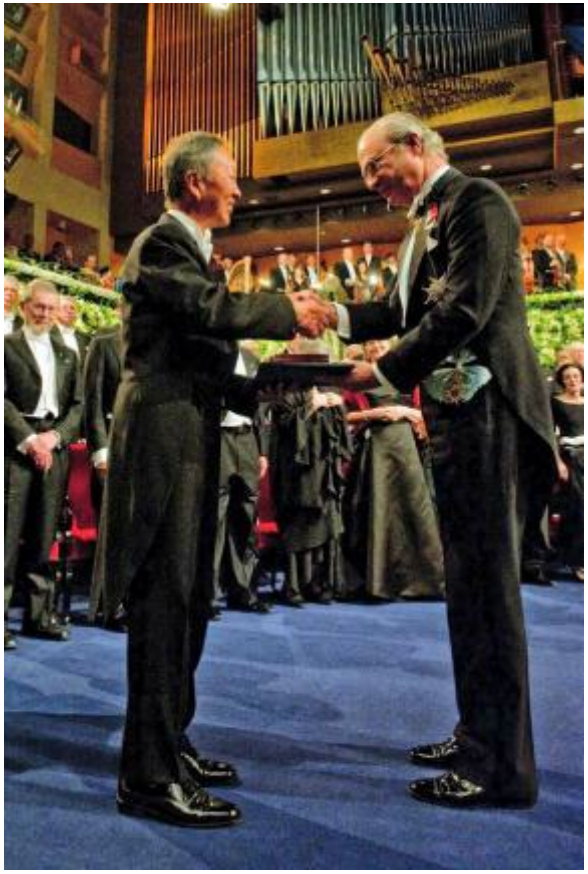
Nobel Prize ceremony in Stockholm on December 10 every year



... may take a few years after graduation...

The Nobel Banquett

International students from KTH attended the Nobel Banquett in, the Stockholm City Hall, dressed in traditional costumes.

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Welcome to KTH: launch your career!

Videos about KTH

https://space.bilibili.com/12838896/video

https://www.bilibili.com/video/BV1C5411j78Y?spm_id_from=333.999.0.0