KTH ROYAL INSTITUTE OF TECHNOLOGY



KTH Royal Institute of Technology

Master's studies 2020



www.kth.se/studies

A brighter tomorrow begins here

Welcome to KTH, an illustrious university with a rich history of pioneering ideas and innovation that dates back nearly 200 years. Our talented researchers and academics continue to work in our state-of-the-art facilities to discover new advances that will benefit industry and, more importantly, society as a whole.

Our extensive, international student body and partnerships with universities around the world make KTH an inspiring environment with a global perspective, where master's students are able to discover the full potential of their chosen field of study. I am proud to be part of such an outstanding institution.



butt alosm

Prof. Sigbritt Karlsson President, KTH Royal Institute of Technology





This is KTH

KTH Royal Institute of Technology is the largest and most respected technical university in Sweden—ranked top 100 in the 2020 QS World University Rankings. By choosing KTH, you gain access to a vibrant student life and a prestigious academic environment.

KTH was established in 1827, and since its inception, KTH has been at the centre of the technological advances in Sweden. KTH conducts world-class research in an array of technology and engineering fields. Its strong research reputation has reinforced the university's position as one of the most prominent technical universities in Europe and a force to be reckoned with globally. Sweden and KTH have a tradition of attracting talents from all corners of the world. At KTH, you will have the opportunity to meet a diversity of people with different experiences, who will widen your horizons and challenge you to excel. KTH inspires students to look for innovation in challenges and real-world problems, contributing to a brighter tomorrow.

KTH in numbers

- 13,000 full-time students
- 2,000 doctoral students
- 308 professors
- 280 associate professors
- 60 master's programmes

Five campuses in Stockholm

KTH has five campuses in the Stockholm region. Strategic placements of the campuses enables in-depth collaboration with industry and the surrounding community, all with a shared focus on digitalisation, sustainability, internationalisation and equality.

KTH's main campus is located in central Stockholm and could be described as a small town in the middle of a big city. It has been an important centre for research and education since the early 20th century.

KTH Kista campus is situated in the heart of Kista Science City, home to over 1,000 ICT companies such as Ericsson, IBM and Microsoft. A close collaboration with these companies creates unique opportunities for students to interact with industry.

KTH Flemingsberg campus is situated in one of Northern Europe's key areas for medical technology. In Flemingsberg, KTH is joined by Karolinska Institutet and Södertörn University College, creating a student community with over 10,000 students.

KTH Södertälje campus is constantly evolving through close co-operation with companies such as Scania and AstraZeneca. This is the southernmost and smallest KTH campus, making it a close-knit student community.

KTH Solna is located in an important national hub for research within various life science disciplines. The main focus of the campus is the Science for Life Laboratory, a joint effort between the highest ranked universities in Scandinavia (KTH, Karolinska Institutet, Stockholm University and Uppsala University).

KTH in QS World University Rankings

- 98 among all universities
- 36 in Engineering and Technology
- Top 30 in Electrical Engineering, Architecture and Built Environment, Mechanical Engineering and Materials Science

How to apply

The application period for most master's programmes is between 16 October 2019 and 15 January 2020 and the applications are made through University Admissions, an online application portal for all Swedish universities.



Choose programmes

Find one or more programmes and verify that you meet the general and programme specific admission requirements. All programmes together with information on requirements, future career opportunities, sustainable development and students' experiences are presented on the KTH website, *www.kth.se/studies.*

2 Submit your online application by 15 January Create an account on the University Admissions website, *www.universityadmissions.com*. Select programmes and submit your application. You can apply to four programmes and these should be ranked in your order of priority.

3 Submit your required documents by 3 February Your application will be considered incomplete if you do not submit all the required documents.

Pay the application fee or document your citizenship by 3 February

If you are are not a citizen of an EU/EEA country or Switzerland, an application fee of SEK 900 is required. Citizens of an EU/ EEA country or Switzerland are not required to pay the application fee, but must prove their citizenship status.

5 Check the selection results on 3 April

The notification of selection results will be published at *www.universityadmissions.com* on 3 April. You do not need to reply to your offer. If you are admitted, KTH will provide further information about how to prepare for your studies.

Some joint programmes have other application processes and deadlines. More detailed information for each programme is found at *www.kth.se/studies*.





Master's programmes

KTH is organised into five schools that together offer 60 master's programmes. The programmes are taught in English and generally last two years. 14 of the programmes are joint programmes given in collaboration with other prominent universities.

Architecture and the Built Environment

- Architectural Lighting Design (One year)
- Architecture
- Civil and Architectural Engineering
- Environmental Engineering and Sustainable Infrastructure
- Real Estate and Construction Management
- Sustainable Urban Planning and Design
- Transport and Geoinformation Technology
- Transport, Mobility and Innovation (Joint EIT)
- Sustainable Technology

Electrical Engineering and Computer Science

- Communication Systems
- Computer Science
- Electric Power Engineering
- Electromagnetics, Fusion and Space Engineering
- Embedded Systems
- Energy for Smart Cities (Joint EIT)
- ICT Innovation
- ICT Innovation (Joint EIT)
- Information and Network Engineering
- Interactive Media Technology
- Machine Learning
- Media Management
- Nanotechnology
- Renewable Energy RENE (Joint EIT)
- Security and Cloud Computing SECCLO (Joint Erasmus+)
- Smart Electrical Networks and Systems SENSE (Joint EIT)
- Software Engineering of Distributed Systems
- Systems, Control and Robotics

Engineering Sciences

- Aerospace Engineering
- Applied and Computational Mathematics
- Computer Simulations for Science and Engineering (Joint)
- Engineering Mechanics
- Engineering Physics
- Mathematics (Joint KTH/SU)
- Naval Architecture
- Nuclear Energy EMINE (Joint EIT)
- Nuclear Energy Engineering
- Railway Engineering
- Vehicle Engineering

Engineering Sciences in Chemistry, Biotechnology and Health

- Chemical Engineering for Energy and the Environment
- Industrial and Environmental Biotechnology
- Macromolecular Materials
- Medical Biotechnology
- Medical Engineering
- Molecular Science and Engineering
- Molecular Techniques in Life Science (Joint KTH/SU/KI)
- Polymer Technology (Joint Nordic Five Tech)
- Sports Technology
- Technology, Work and Health

EIT

The prestigious EU collaboration European Institute of Innovation and Technology (EIT) offers joint programmes. Students spend one year at KTH and one at a partner university.

Industrial Engineering and Management

- Entrepreneurship and Innovation Management (One year)
- Engineering Design
- Engineering Materials Science
- Environomical Pathways for Sustainable Energy Systems SELECT (Joint EIT)
- Industrial Management
- Innovative Sustainable Energy Engineering (Joint Nordic Five Tech)
- Integrated Product Design
- Management and Engineering of Environment and Energy (Joint Erasmus+)
- Production Engineering and Management
- Sustainable Energy Engineering
- Sustainable Production Development
- Turbomachinery Aeromechanic University Training (Joint)

Sustainable development

KTH is ranked as one of the world's 10 leading universities in scores based on the UN's sustainable development goals. One of KTH's most important goals is that all graduates have up-to-date knowledge and tools to move society in a more sustainable direction. Therefore, sustainable development is integrated into the curriculum of all education programmes.

Admission requirements

Admission to a master's programme requires:

- A completed bachelor's degree, corresponding to a Swedish bachelor's degree (180 ECTS credits), or equivalent academic qualifications from an internationally recognised university. A bachelor's degree in science or engineering is required for most programmes.
- English proficiency can be demonstrated through an internationally recognised English test for example IELTS Academic 6,5 (no section lower than 5.5) or TOEFL iBT 90 (20 in written test).
- Programme specific requirements are listed in the programme descriptions.

The selection process is highly competitive, since students who meet the entry requirements compete for a limited number of places based on merit.

Tuition fees

Citizens of an EU/EEA country or Switzerland are not required to pay application and tuition fees, with the exception of some joint programmes. If you are not a citizen of an EU/EEA country or Switzerland, you are generally required to pay application and tuition fees. The tuition fee for most two year programmes is SEK 310,000 (€29,000).

For students required to pay tuition fees, there are a limited number of KTH and external scholarships available. Every year, KTH awards around 35 scholarships based on academic excellence: KTH Scholarship, KTH One-Year Scholarship and KTH Joint Programme Scholarship.

You can find complete information on the admission requirements, selection, scholarships and fees for each programme at *www.kth.se/studies*

KTH alumni all over the world

There are around 80,000 KTH alumni world-wide, and the alumni community enables you to maintain and widen your social and professional network. Every year KTH invites alumni to take part in a wide range of events here on campus or hosted by our international alumni chapters. KTH has alumni chapters in Brazil, China, Germany, India, Indonesia, Norway, Singapore, Spain, Switzerland, Thailand and USA.

Career after KTH

A KTH degree is a sign of academic excellence, ambition and an innovative mind-set. KTH graduates are highly attractive on the job market and have succeeded in a wide range of fields.

A reputation that precedes you

A degree from KTH is a springboard to a successful career. KTH alumni are quickly established on the job market. Over 40 percent of KTH alumni have acquired jobs before receiving their degree. In the QS Graduate Employability Rankings 2019, KTH ranked as the 79th best university in the world for employer reputation.

Each year, over 500 degree project proposals are posted on the KTH project portal by companies such as Ericsson, SAAB and Scania. Over 20 percent of the students get their first employment through their degree projects. KTH Career service helps students achieve their future plans through career planning, career development seminars and job application support.

The innovative mind-set

As the home of the Nobel Prize, Sweden is known for its innovation and entrepreneurship, with inventions ranging from the steam turbine and dynamite to Bluetooth and Skype. At KTH Innovation, students are given support to commercialise their business ideas and over 14 percent of KTH alumni start their own company.

Doctoral studies (PhD)

KTH's dynamic international research environment and world-class facilities make it an excellent choice for PhD studies. Typically, doctoral students are employed by KTH and receive a monthly salary. Vacant doctoral positions are published regularly on *www.kth.se/phd*.



Volvo Group Trucks Technology Abhineet Tomar, Hardware Technology Engineer Programme: Embedded Systems

"KTH provides a perfect platform for overall development, and I was able to pursue my technical as well as creative aspirations. I got to work on projects that involved real-world challenges in collaboration with industry, which helped me making better career choices."

KTH Division of Building and Real Estate Economics Mo Zheng, PhD student *Programme: Real Estate and Construction Management*

"I am extremely happy with what I am doing as a doctoral student every day. I am working with smart people and the best researchers in my field. It is a super equal working environment, and you don't have to think about hierarchies or gender."

Get to know us better

Do you want to know more about studies and life as a student at Sweden's largest and most prestigious technical university? There are a lot of ways to get to know us better.

Ask a KTH student

Through our website you can contact 50 students from all over the world who are studying at KTH. You can ask them about anything from course literature to the availability of your national cuisine in Stockholm.

The International Student Blog

The international student bloggers will give you a glimpse of their daily life as students at KTH. You can find and follow them at *www.kth.se/studentblog*

Follow KTH

Keep up with the latest activities and news through our official social media.

f KTH Royal Institute of Technology
★ KTHuniversity
⊘ KTHuniversity **in** KTH Royal Institute of Technology
♂ kthuniversity

Also, subscribe to the newsletters for prospective students and you will receive important real-time information to make your path to KTH as smooth as possible. Go to *www.kth.se/follow* to subscribe.





Isabel Spence Master's programme in Architecture

"I love the multiculturalism and diversity! Often, I may be sitting around a table with friends having *fika* (coffee and Swedish pastries, a lifestyle concept I have very quickly embraced) and everyone is from a different country!"



Shaji Baig Master's programme in Embedded Systems

"The best thing about being in Stockholm is the unique lifestyle a person can enjoy. There are lush green parks nearby. You can find jogging tracks, trails for hiking, and beaches for swimming within easy reach."



Markéta Sluková Joint master's programme in Mathematics

"I have enjoyed the more practical approach to studies at KTH. You will have plenty of opportunities to collaborate with other students and get to know your classmates. I have also found the professors approachable and friendly.



Ioanna Sapouna Master's programme in Molecular Science and Engineering

"KTH is one of the best universities in Europe, at the forefront of technological development. There are many opportunities and contacts with the industry in almost every field."



Junjie Lei Master's programme in Engineering Design, Mechatronics track

"People at KTH are willing to help. When you have a problem that you can't solve by yourself regarding accommodation, studies or course registration, all you need to do is to ask KTH staff for help and they are willing to offer just that."





Life in Stockholm

Stockholm, the capital of Sweden and home of KTH, consistently ranks as one of the greenest, most high-tech and most enterprising cities in Europe.

Stockholm was founded in the 13th century and is situated on the east cost of Sweden, bordering the Baltic Sea. With 2.1 million inhabitants, it is the heart of Swedish trade and business life, and is known for its rich cultural history and closeness to nature. Stockholm is situated on 14 islands, giving you sea views at almost every street corner.

Even though Sweden is a small country, home to just 0.13 per cent of the global population, it is a world leader in innovation. Sweden's entrepreneurial spirit is fuelled by a historic tradition of inventors, a supportive start-up culture, and a close collaboration between research and industry.

The city's rich intellectual heritage and entrepreneurial environment make it the ideal place for international students to put their learning into practice.

London

Madrid •

Paris •

Dublin ⁴

Stockholm

Prague

Athens •

Amsterdam

Rome

Barcelona

Moscow •

Print: Elanders Sverige AB, August 2019, ISO 9001:2015, ISO 14001:2015, climate neutral and Nordic Swan Ecolabel print house. Printed on PEPC/O5-233-98 and FSC® C007342 certified paper produced in Sweden.

Photo: Emilia Bergmark-Jiménez, Karlberg media, Folio, Fredrik Persson, Simon Paulin/imagebank.sweden.se, Kalle Börjeson, Jann Lipka, Anne-Sofie Eriksson/ mediabank.visitstockholm.com

PEFC

PEFC Certified

www.pefc.org





The mark of responsible forestry