Annual Report 2024

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About the annual report

The annual report of KTH Royal Institute of Technology is governed by the Ordinance on annual accounts and budget documentation (2000:605). The annual report shall provide a true and fair view of the organisation's results.

The contents of the annual report comprise not only information that KTH is required to report by law and government mandates, but also other information that KTH has chosen to present about its activities in general, and happenings in 2024 in particular.

The annual report contains reporting and monitoring of a large number of parameters that follow from the reporting requirements in the Higher Education Act, the public service agreement for KTH and universities and higher education institutions for the 2024 financial year, and the Ordinance on Annual Accounts and Budget Documentation. According to the Swedish National Financial Management Authority's regulations for Chapter 3(1) of the Ordinance on Annual Accounts and Budget Documentation, the public authority must also produce performance indicators and report according to these.

Quantitative data on volume and development are mainly obtained from KTH's operations system. Quantitative data in the text is often expressed as x (y), where x is the data for 2024 and y is the corresponding data for 2023.

Qualitative data on activities and developments are mainly obtained from decisions, minutes and information on the KTH website.

The annual report has been compiled within KTH's University Administration.

Abbreviations are used in KTH's annual report. The most common ones are listed below.

Commonly used abbreviations

KTH internal

ABE	School of Architecture and the Built Environment
CBH	School of Engineering Sciences in Chemistry, Biotechnology and Health
EECS	School of Electrical Engineering and Computer Science
ITM	School of Industrial Engineering and Management
SCI	School of Engineering Sciences
JML	Gender equality, diversity and equal opportunities
SciLifeLab	Science for Life Laboratory

Authorities, organisations and miscellaneous

AI	Artificial Intelligence
EIT	European Institute of Innovation and Technology
HPR	Annual performance equivalent
HST	Full time equivalent student
KAW	Knut and Alice Wallenberg Foundation
RISE	Research Institutes of Sweden AB
SSF	Swedish Foundation for Strategic Research
SUHF	Association of Swedish Higher Education Institutions
THS	Student Union at the Royal Institute of Technology
UHR	Swedish Council for Higher Education
UKÄ	Swedish Higher Education Authority
Unite!	University Network for Innovation, Technology and Engineering (university alliance, part of the EU's European Universities initiative)
Vinnova	Swedish Governmental Agency for Innovation Systems

This is KTH

The Royal Institute of Technology (KTH) has grown since 1827 into an international technical university. As Sweden's biggest university for technical education and research, KTH brings together students, teachers and researchers from all over the world. KTH's activities are based on a strong tradition of pursuing science and innovation, with emphasis on contributing to the sustainable development of society.

With a growing network of industrial partners, societal stakeholders and other universities, KTH is driving the development of how some of the greatest challenges of our age, such as climate change, food and water security, future energy supply and improved quality of life, should be addressed in a sustainable manner.

KTH's research and education covers the natural sciences and all branches of technology, as well as architecture, industrial economics, urban planning, history, languages and philosophy. KTH's innovative climate is driving new perspectives and solutions and promoting excellence in education and research. With outstanding academic expertise and educational innovation, KTH educates engineers, architects, teachers and researchers who will be able to lead the transition to a sustainable and gender-equal world. The university has around 15,000 full time equivalent students and 1,500 doctoral students recruited both from Sweden and globally. KTH's programmes promote critical thinking and collaboration skills as a way of teaching students how to deal with complex challenges in a changing world. Students are given the opportunity to tackle real problems through partnerships with industry and society. KTH's interactive and experimental learning environments develop practical professional skills and innovative thinking.

KTH conducts both basic and applied research. KTH's research environments enable interdisciplinary and external collaborations that contribute to new knowledge and new technologies, products and services. KTH is committed to academic freedom and maintaining open, transparent research.

KTH in figures 2024

Educational activities

- Master of Architecture and 17 Master of Science in Engineering programmes
- Master of Science in Engineering combined with Degree in Education
- 7 Bachelor of Science in Engineering programmes
- Subject Teacher Education in Technology
- Supplementary teacher education
- Master's programmes (one and two year)
- Bachelor's programmes and two-year university diplomas
- Further education, technical preparatory year/semester
- Third cycle education

- 15,200 full time students, of which 34 per cent are women and 66 per cent men (including fee-paying students)
- 12,281 annual performance equivalents (including fee-paying students)
- 1,551 active research students (at least 50 per cent activity), of which 36 per cent are women and 64 per cent men

- 3,056 new students on the first year of Master of Science in Engineering, Master of Architecture and Bachelor of Science in Engineering programmes of which 32 per cent are women and 68 per cent men
- 877 new students on the Technical Preparatory Year/ Semester, of which 31 percent are women and 69 per cent men
- 2,902 new students on one and two-year Master's programmes, 36 per cent women and 64 per cent men, of whom
  - 1,155 students previously on Master of Science in Engineering programmes and
  - 1,747 students studying solely on a one or two-year Master's programme at KTH
- 275 newly-admitted students to doctoral studies programmes, of which 36 per cent are women and 64 per cent men

- 111 Master of Architecture degrees, 58 per cent to women and 42 per cent to men
- 1,206 Master of Science in Engineering degrees, 34 per cent to women and 66 per cent to men
- 309 Bachelor of Science in Engineering degrees, 24 per cent to women and 76 per cent to men
- 1,863 Master/Master of Science (one and two-year) degrees, 35 per cent to women and 65 per cent to men
- 225 PhDs, 33 per cent to women and 67 per cent to men
- 41 licentiate degrees, 37 per cent to women and 63 per cent to men

Floor Space

282 500 m²

Research

Primary responsibility for five national strategic research areas

- E-science
- IT and mobile communication
- Transport research
- Production engineering
- Molecular biosciences (Science for Life Laboratory)

Partner in another five areas

Lead partner in five programme areas within the European Institute of Innovation and Technology (EIT)

- EIT InnoEnergy
- EIT Digital
- EIT Health
- EIT Raw Materials
- EIT Urban Mobility

External financing, income from grants, 2,105 MSEK (excluding transfers)

- MSEK 378 the Swedish Research Council
- MSEK 359 EU
- MSEK 302 Wallenberg Foundations
- MSEK 211 Vinnova
- MSEK 150 Swedish Energy Agency
- MSEK 277 other government agencies
- MSEK 427 other external financing including private funds

Financial situation

MSEK 6,884 in total turnover (of which MSEK 882 transfers)
Government grants (excluding transfers)

- MSEK 1,438 First and second level (undergraduate) educational programmes
- MSEK 1,506 Research and third education cycle

Employees

The equivalent of 4,117 full time positions, of which 1,743 are women and 2,374 men of which:

- 368 professors, 84 women and 284 men (including visiting and adjunct professors)
- 255 associate professors, 73 women and 182 men

Organisation

KTH's courses, study programmes and research are organised into five schools. Each school has departments, divisions and research centres. The schools report directly to the President. Each school is led by a head of school. Alongside the line organisation, there is a faculty organisation with the Faculty Council at a university-wide level and faculty boards at a school-wide level. KTH's faculty organisation is appointed by election.

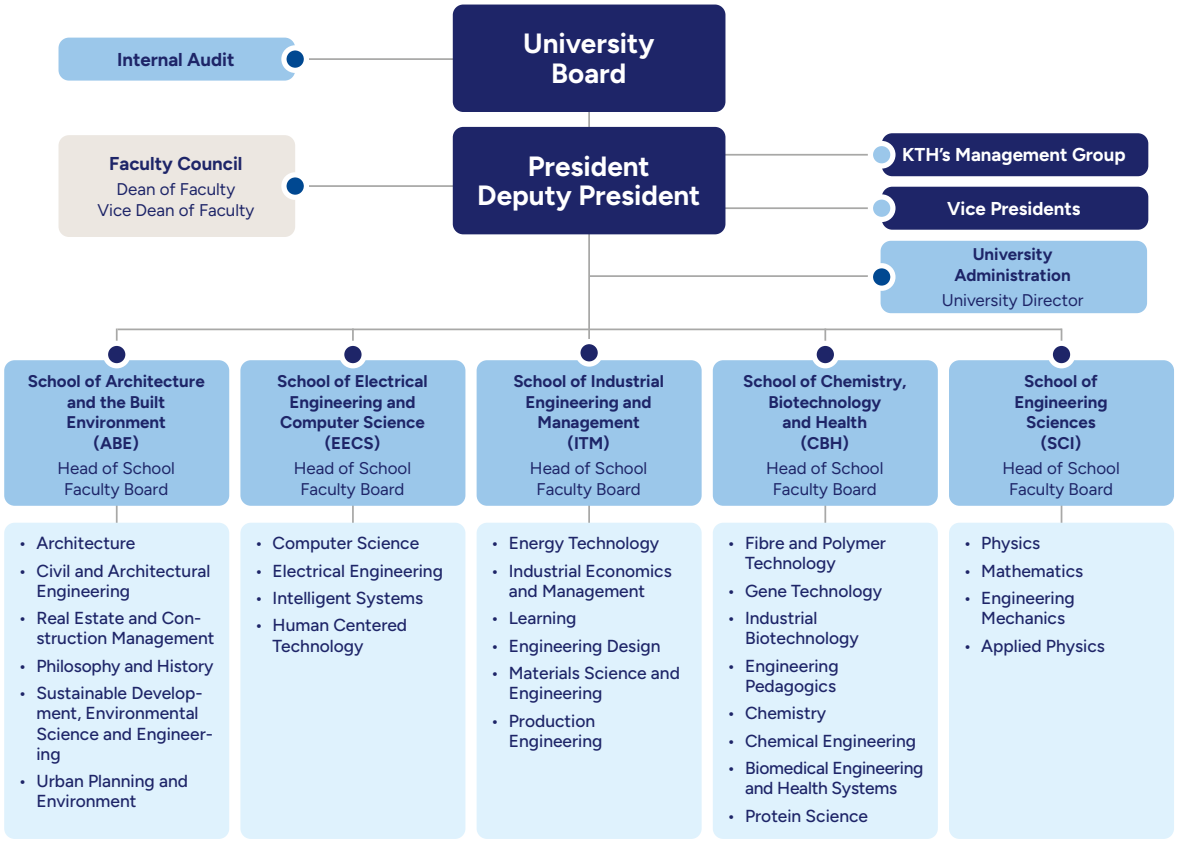
The University Board oversees all KTH affairs and is responsible for ensuring fulfilment of its assignments. The Board consists of a total of 15 members: the President, 8 external members, 3 teacher members and 3 student members.

The President is the head of the public authority and bears overall responsibility for KTH's activities under the University Board. The Deputy President is the President's deputy. The University Director is the highest head of administration at the University. KTH has two Vice Presidents: one for research and one for international relations.

The President has a management group that deals with issues related to the strategic management and governance of the university. The management group also advises the President on matters relating to the planning, monitoring and development of the University's activities. The management group is made up of the President, the Deputy President, heads of school, the University Director, the Deputy University Director and the chair of the Student Union at the Royal Institute of Technology. The Vice President for Research, the Vice President for International Relations, the Dean and the Vice-Dean of Faculty are permanently co-opted, with the option of participating in meetings of the management group.

The Faculty Council, chaired by the Dean of Faculty, is a university-wide body for KTH's quality development and faculty support work. The Faculty Council bears overall responsibility for developing the quality of education, research and societal collaboration at KTH, and also for recruitment and promotion processes for teaching positions. The Faculty Council manages and develops KTH's quality system and is also tasked with creating beneficial conditions for interdisciplinary faculty exchange. The majority of members are academically qualified and are appointed by teachers and researchers. Students are represented on the Faculty Council.

Faculty boards have been established in each school as of 2024. The faculty boards are the schools' bodies for faculty influence and decision-making. The faculty boards bear overall responsibility for the schools' long-term development of education and conditions for research in relation to KTH's vision and goals. The faculty boards are also responsible for monitoring and developing quality within the framework of KTH's quality system; as well as for faculty support, and for establishing forms of faculty exchange across the schools' operational areas, subjects and research disciplines. The faculty boards are made up of the head of school (who acts as the chair), six teacher members (one of whom acts as the vice-chair), two external members and two student members.



President's foreword

Not only does the annual report present the past year at KTH, providing facts and figures to demonstrate how the university has developed; it also serves as a basis for developments in education, research and collaboration for the next few years. To begin with, a few observations from 2024 are provided here without claiming to provide a comprehensive picture: reading the annual report in full is recommended for that purpose.

KTH is currently reviewing the courses and programmes offered to better reflect societal relevance and promote development towards the sustainable society of the future and integration with state-of-the-art research. It is also gratifying to see that the number of applicants to courses and study programmes at KTH increased sharply for the autumn semester 2024 and that KTH's international recruitment remains very strong.

Research at KTH is largely funded by external competitive project grants. External research funding accounted for about 64 per cent in 2024, while research with direct government funding accounted for about 36 per cent. In other words, KTH is very successful when it comes to attracting external research grants. The Knut and Alice Wallenberg Foundation's contribution of an additional SEK 600 million to the national programme for data-driven life sciences, DDLS, is one of the larger and more prestigious grants awarded in 2024. This is further evidence of the successful work of SciLifeLab in collaboration with a number of strong universities. In the face of strong international competition, KTH has also received four rounds of direct government funding from the European Research Council, ERC, for groundbreaking research.

KTH is active in ten strategic research domains, known as SFOs, and is the accountable authority for them in the fields of IT and mobile communications, e-science, transport, production and molecular bioscience. In 2024, KTH's research committee has prepared a number of decisions on strategic research initiatives with a view to strengthening KTH's research for national and European calls going forward. These include AI, nuclear technology and batteries.

In 2024, activities at Cybercampus Sweden have been successfully built up in accordance with a specific government mandate. To date, 24 organisations from the academic community and the public and private sectors from all over Sweden have expressed an intention to enter into a formal partnership with Cybercampus Sweden. The overall strategic partnerships with companies and public organisations have undergone further development during the year, and KTH now has formal strategic collaborations with 16 partners in industry and the public sector.

Efforts to achieve a balanced budget are continuing. It is necessary to tackle the sharp rise in costs, not least the spiralling cost of rent in recent years. Optimising premises, increasing revenue from first-cycle education and research, reducing support costs, active restructuring and better systems for internal planning and monitoring mean that KTH is in a position to report a better result for 2024 than before.

KTH's vision is to take the lead in sustainable societal development, and this has become an increasingly clear direction for the entire organisation during the year. This is making an impact internally in a variety of areas – through the introduction of the One Planet Plate to reduce the climate impact of meals, for example – and externally through new collaborations and major research initiatives.

Anders Söderholm,
KTH President

Students' statement

Study time, leisure and future

The Student Union at the Royal Institute of Technology, THS, has been working for all students at KTH since 1902. THS aims to create the best possible study time, leisure and future for KTH students. In practice, this means that we want our students to get the best education they can get, while having the most enjoyable and fulfilling time of their lives, with good opportunities to continue their careers after their studies. As the representatives of our students, we are proud to say that we work with KTH for this. We can move forward together by being an active partner that highlights the needs of students while also familiarising ourselves with KTH's opportunities and limitations!

Key issues of the year

Following last year's decision to relocate KTH's operations in Södertälje and Kista, THS has continued to emphasise the student perspective during the relocation process. At THS, we are grateful for all the opportunities we are having to influence the process. This became very clear when KTH's property division developed a proposal for new chapter premises in line with students' wishes. On 3 December, the THS Student Union Board of Directors decided that the Information Technology Chapter from Kista and the Technology Foundation Year Chapter will have access to the new chapter premises. Having their own premises at KTH Campus provides these chapters with better opportunities to continue and develop their activities.

KTH and THS have jointly developed a number of goals to develop the university's educational environments on account of the growing student population on KTH Campus, due to both the relocation and increased admission numbers. The purpose of these goals is to ensure a good quality of education as KTH Campus makes room for more students, and we are pleased that such initiatives are being implemented at a time when there is otherwise a risk of the campus environment becoming more crowded for students.

Moreover, THS and KTH are jointly pursuing further work on places on campus, based on the report entitled *En stol är inte en studieplats* [A seat is not a place] produced by THS in 2023. THS also produced a new report on a vibrant campus at KTH. This was published in January 2024 and mapped the conditions for student welfare activities at KTH.

Additionally, KTH decided in 2023 to introduce anonymous examination, where applicable, following strong lobbying from the student union. KTH has now taken the first steps towards implementing this, and at THS we are very positive about it. We feel that anonymous examination is a given if we are to guarantee equal treatment of students; and we are very pleased with this progress towards a fairer and more equitable education.

Quite a few things have happened in our third-cycle education as well. Following the doctoral student chapter's survey of doctoral students, KTH has now continued its efforts to develop a survey that aims to map the working and study environment for doctoral students at the university. Additionally, KTH is reviewing a change in the guidelines for third-cycle education to include a course in Swedish for those who need it, following lobbying from THS and the doctoral student chapter.

Orientation for newly admitted students

For many students, their orientation provides the first and biggest memory of their time with us. This is a high-intensity period where all of KTH is overflowing with colourful, energetic students who are doing everything in their power to make our new students feel as welcome as possible in the big world of university. Together, our students spend hundreds of thousands of hours volunteering to help with orientation initiatives, and to give our new students a welcome to KTH that they will never forget.

We were able to adopt a preventive approach with KTH to develop the orientation and make it a safer and fun experience for both recipients and new entrants.

Students organise events

Besides orientation and welcoming new students, there are of course a variety of activities ongoing among students. Four exam pubs were arranged in our student union building Nymble in 2024, which hosted an average of 2,000 people per event (making it one of the biggest nightclubs in the Nordic region!). Additionally, THS and KTH have initiated a collaboration with the RFSU Dare to Care initiative, which is working preventively to create safer club environments; and our latest exam pub was attended by a number of volunteers from RFSU. Our students also had the opportunity to get in touch with the business community during THS Armada, the student union's labour market fair attended by almost 150 companies.

Gustav Heldt,
Student Union President, THS

Education

Education at first and second-cycle level

Courses and programmes offered

KTH's education focuses mainly on the technical and scientific fields, with programmes leading to Master of Science in Engineering, Bachelor of Science in Engineering and Master of Architecture degrees. KTH also offers teacher training, qualifying courses and a large number of in-service training courses.

A series of measures have been put in place in both 2023 and 2024 to increase the volume of education. KTH had considerably more beginners in 2024 than in 2023, and the number of full time equivalent students has increased significantly. The number of externally recruited beginners on two-year Master's programmes has increased by almost 400. See Figures 2 and 7.

KTH has a number of two-year Master's programmes in the field of energy, including electrical engineering, sustainable energy engineering, innovative energy engineering, innovative sustainable energy engineering, environomical pathways for sustainable energy systems, and technology and sustainable development.

Priorities in KTH's courses and programmes offered are mainly defined between programmes and programme types. The courses and programmes offered mainly include of courses and study programmes in engineering and technology. Of KTH's total number of full time equivalent students with direct government funding, more than 90 per cent are in the natural sciences and technology.

External members participate in the schools' faculty boards and programme councils, where they have the opportunity to express their views on the courses and programmes offered. There are also external members on the Faculty Council and the University Board. These groups regularly discuss what programmes are needed in society and are in demand by companies, public authorities and organisations, for example. More specific discussions are also held within the strategic partnerships that KTH has with a number of companies, public authorities and organisations. See the section entitled *Collaboration*.

Over the last few years, both the government's special lifelong learning initiative and KTH's internal goal, to increase lifelong learning, have meant that priorities have been defined so that more freestanding courses can be offered. Just under 6 (4) per cent of KTH's total education volume was provided in the form of freestanding courses in 2024.

There is a significant shortage of teachers in some natural sciences and technology subjects. KTH is working to meet the great need for trained teachers by conducting bridging teacher education programmes. Additionally, KTH has been commissioned to run bridging teacher education programmes for people with third-cycle qualifications. In addition, KTH has been tasked since 2022 with running a shorter bridging teacher training programme worth 60 credits. KTH already offers the Master of Science in Engineering and Education programme, which leads to both a Master of Arts/Science in Education and a Master of Science in Engineering. See the section entitled *Teacher training programmes*.

Education at KTH includes digital elements and learning activities to a great extent, but courses in programmes are rarely run entirely remotely. In 2024, KTH offered a total of 110 (87) distance learning courses that generated 679 (357) full time equivalent students, of whom 617 (296) were full time equivalent students on freestanding courses. In terms of KTH's total number of full time equivalent students with direct government funding, 5 per cent of students were studying on distance learning courses. Within KTH's freestanding courses, 85 (77) per cent of full time equivalent students were studying entirely on distance learning courses.

Increased internationalisation is one of KTH's goals. KTH's educational environment is highly international, and KTH students are offered various types of exchange opportunities through KTH's educational partnerships, exchange agreements and international partnerships. A large proportion of students at second-cycle are international students. See the sections entitled *Partnerships and International mobility*.

Qualifying programmes

The technology foundation year is a one-year qualifying programme aimed at students who have not achieved full eligibility for KTH study programmes during their upper secondary school studies. The qualifying courses provide bridging education at upper secondary level in mathematics, physics and chemistry. It is also possible to apply just for the second semester of the foundation year, which is particularly suitable for students who have followed the upper secondary school technology programme.

Successful completion of KTH's foundation year or foundation semester allows students to apply for specially reserved places on any of KTH's Master of Science in Engineering, Bachelor of Science in Engineering or Master of Arts/Science in Education programmes.

In 2024, KTH offered qualifying programmes at KTH Campus, KTH Flemingsberg and KTH Södertälje. Students had the opportunity to start qualifying courses in both the autumn and spring semesters. See the section entitled *Beginners*.

Preparatory courses for university following upper secondary school

KTH already has online preparatory courses in mathematics, programming and physics. These courses are aimed at applicants to technical and scientific programmes and are designed to support and prepare beginners as they make the transition from upper secondary school to university college. Further development of the courses has continued during the year according to an evidence-based digital learning model from the international Open Learning Initiative network.

In conjunction with these courses, there are modules that prepare applicants for the mathematics and physics tests: see the section entitled *Alternative selection*.

Relocation and development of KTH's sustainable production programmes

Since 2016, KTH has been implementing an initiative promoting education and research in Södertälje in collaboration with the municipality of Södertälje, Scania and AstraZeneca. The education initiative included the Master's programme in industrial engineering and sustainability, the Bachelor's programme in industrial engineering and the two-year Master's programme in sustainable production development. KTH Södertälje already offered Bachelor's programmes in mechanical engineering, industrial engineering and production maintenance, as well as a technology foundation year programme. Despite extensive investment, KTH Södertälje has not achieved the anticipated volume increases and for some time has been witnessing a decline in the number of applicants per place for these programmes. Student completion rates are also generally lower in Södertälje compared to KTH's other campuses.

The University Board decided in November 2023 that operations in Södertälje were to be relocated to KTH Campus and KTH Flemingsberg with a view to strengthening and consolidating KTH's education and research environments and reducing KTH's premises costs. The relocation project was planned in 2024, and the relocation of all operations at KTH Södertälje will be completed by August 2025.

Teaching during the 2024/2025 academic year will continue at KTH Södertälje for the technology foundation year, the two-year Master's programme in sustainable production development, parts of the Master's programme in industrial engineering and sustainability, and the abovementioned Bachelor's programme in engineering. Only the technology foundation year and the Master's programme in sustainable production development admitted new students to KTH Södertälje in 2024. By autumn 2025, teaching for the Bachelor's programme in engineering, the Master's programme in engineering and two-year Master's programmes will be relocated to KTH Campus, and teaching in the technology foundation year will be relocated to KTH Flemingsberg. The close connection to industry in Södertälje will be maintained following the relocation through applied elements in the programmes, for example. An agreement has also been concluded regarding the running of a technology foundation year via distance learning at local study centres in Södertälje, Norrtälje and Nynäshamn.

In 2023, a new Bachelor's programme in industrial engineering was developed in close collaboration with industry. The first students were admitted in the autumn semester of 2024. This programme replaced the two existing Bachelor of Engineering programmes at KTH Södertälje. The new programme admitted students to KTH Campus, but with some teaching taking place in Södertälje. Applications for this new programme were strong, with 107 students admitted to Year 1 in the autumn semester of 2024.

Admission to Year 1 of the Master's programme in industrial engineering and sustainability was also based at KTH Campus for the autumn semester of 2024. The number of applicants to this programme was also higher than before; and by the autumn semester of 2024, we had 67 (45) beginners on the Master's programme in industrial engineering and sustainability. The two-year Master's programme in sustainable production development admitted 14 (10) students to KTH Södertälje. At KTH Södertälje, the qualifying technology foundation year programme had 172 (154) beginners and the technology foundation year, semester 2 had 49 beginners.

Teacher training programmes

KTH offers a Master of Science in Engineering and Education programme, a Master of Arts/Science in Education and various forms of bridging teacher education programmes. Within the framework of teacher training programmes, students undertake placements, which means that students are on site at a school where they participate in day-to-day work under supervision.

Master of Science in Engineering and Education

The Master of Science in Engineering and Education programme leads to both a Master of Science in Engineering and a Degree of Master of Arts/Science in Upper Secondary Education. KTH has the right to award both Master of Arts in Education and Master of Science in Engineering degrees. All courses were run by KTH in 2024, but teachers from Stockholm University were involved in several cases.

All students on the Master of Science in Engineering and Education programme have mathematics as one of their teaching subjects. In Year 1, students acquire a basic knowledge of the four subject areas included in the various programme specialisations. These subjects are physics, chemistry and technology specialising in computing or technology specialising in energy and environment. Prior to Year 2, students choose one of the four possible subject specialisations and thus their teaching subject in addition to mathematics.

When choosing a specialisation, students are informed that there is a high demand for teachers in all these subjects. Chemistry and technology are the subjects where the teacher shortage is at its most acute. It has been difficult to find enough placements at upper secondary schools as a consequence of the teacher shortage.

The programme had 101 (99) first choice applicants in the 2024 autumn semester. 75 (71) students started the programme in 2024; with 47 per cent women and 53 per cent men: see *Figure 2*. 28 (33) students graduated from the programme in 2024; 54 per cent women and 46 per cent men: see *Figure 9*.

Master of Arts/Science in Education

The Master of Arts/Science in Education specialising in technology comprises 270 credits and started in its current form in the autumn semester of 2019. Since the autumn of 2022, KTH has chosen not to allow any admissions to the Master of Arts/Science in Education. Few people have applied for the Master of Arts/Science in Education, and the implementation of the 60-credit temporary supplementary teacher education uses the same resources as the Master of Arts/Science in Education. This programme leads to two different degrees: a Degree of Master of Arts/Science in Secondary Education in technology and mathematics, and a Degree of Bachelor of Science in Engineering.

In total, the programme had about three active students, two of whom have completed placements during the year. One student, a man, graduated in 2024: see *Figure 9*.

Bridging teacher education programmes

The Bridging Teacher Education degree programme (KPU) comprises 90 credits and leads to a Degree of Master of Arts/Science in Secondary Education in one or more of the subjects physics, chemistry, mathematics or technology. Admission to the programme requires sufficient academic qualifications in one or more of these subjects. This programme is delivered in

part as a distance learning course, with some face-to-face meetings at KTH. Some parts of the programme are implemented in partnership with Stockholm University. The programme also continues during the summer, which means that any student who starts in June can be a qualified teacher by the end of August the following year. One third of the programme consists of school placements. Placements for KPU students have become more difficult to arrange in the right subjects and at the right levels, particularly in the subjects of mathematics and engineering and technology at upper secondary level.

Therefore, some students do their placements in Years 7 to 9 even though they will be qualified to teach their subjects in upper secondary schools.

There were 70 (63) first choice applicants for the programme in 2024. 29 (9) students started the programme at the beginning of the summer semester, of whom 45 per cent were women and 55 per cent men: see *Figure 2*.

In 2024, 17 (24) students, of whom 41 per cent were women and 59 per cent men, have graduated after completing the bridging teacher education programme: see *Figure 9*.

New short bridging teacher education programme

The government has commissioned KTH to organise a pilot project involving bridging teacher education programmes leading to a Bachelor or Master of Arts/Science in Education. The purpose of this pilot project is to increase the number of qualified and licensed teachers in schools by enabling a broader target group of people with a previous university degree to study to become teachers through a bridging teacher education programme.

The bridging teacher training degree programme for secondary education comprises 60 credits and leads to a Degree of Master of Arts/Science in Secondary Education in technology and mathematics. Admission to the programme requires completion of a professional or general first-cycle qualification. This programme is delivered in part as a distance learning course, with some face-to-face meetings at KTH. One third of the programme consists of school placements.

There were 66 (52) first choice applicants for the programme in 2024. 26 (19) students started the programme at the beginning of the autumn semester, of whom 50 per cent were women and 50 per cent men: see *Figure 2*. The partial distance learning mode of study aims to allow students from all over the country to take the programme. Of this year's newly admitted students, 96 (100) per cent are residents of the County of Stockholm. Otherwise, there is a spread of age and previous professional experience among the students.

In 2024, 12 (2) students, of whom 58 per cent were women and 42 per cent men, have graduated after completing the shorter bridging teacher education programme: see *Figure 9*.

Bridging teacher education programmes for individuals with third-cycle qualifications

KTH and Stockholm University offer bridging teacher education programmes for the Degree of Master of Arts/Science in Education in mathematics, natural sciences and technology for people with third-cycle qualifications. Students admitted to the programme have the opportunity to receive a special doctoral grant during their studies. The number of places on the programme is determined by the allocation of doctoral grants, which is limited to an average of 70 students per year on a national basis. The programme comprises 90 credits and is run at an accelerated pace over twelve months. This programme is delivered as a partial distance learning course, with about 20 teaching days in Stockholm during the year.

The students come from all over the country. The assignment is limited in time. It was initiated in 2016 and was initially intended to continue until mid-2021. An extension was decided in spring 2021, with an annual programme starting in January for the years 2022 to 2026.

For 2024, the programme had 58 first choice applicants. 12 (35) students started the programme in January, of whom 25 per cent were women and 75 per cent men: see *Figure 2*. 17 (10) students graduated after completing the bridging teacher education programme for people with third-cycle qualifications in 2024; 53 per cent women and 47 per cent men: see *Figure 9*.

The number of applicants has been low for a number of years in all three locations where the programme is arranged. The Ministry of Education has therefore decided that it will only be offered in Stockholm in 2025 and 2026.

Practice-based research and practice schools

KTH is already involved in the government initiative ULF (Education, Learning, Research), which ran until 2024 and will become a permanent activity in 2025. Compensatory teaching for learning and research, K-ULF, is a project run at KTH in collaboration with school authorities as part of ULF. This activity is part of the government's initiative to develop long-term collaboration between universities and accountable authorities in the school system with regard to practice-based research. In 2024, KTH has consolidated its network for practice-based research in cooperation with accountable authorities.

KTH has partnership agreements for practice-based research with the municipality of Värmdö, the municipality of Lidingö, the City of Stockholm, the municipality of Nynäshamn, the municipality of Haninge and NTI-gymnasiet. Representatives from the accountable authorities participate in the K-ULF steering committee, where access to school placements and forecasts of the availability of school placements are a recurring theme.

In 2024, KTH has continued its work on developing what are known as practice schools. Through the existing network of schools in K-ULF, KTH has continued the process of ensuring that a number of school placements per semester are guaranteed by the accountable authorities with which KTH has signed agreements as described above. There is a great deal of interest, but the availability of sufficient qualified supervisors in schools still presents a challenge. That is why KTH has continued to arrange courses for prospective supervisors in 2024. The two courses *Supervising students on school placements*, 3 credits, and *Supervising students on school placements*, advanced course, 4.5 credits, jointly provide the 7.5 credits demanded of a supervisor at a practice school. Unfortunately, the acceptance ratio has been low, as has student completion. Participants have found it difficult to combine their studies with their work as teachers.

The work on practice schools is still under development. In 2024, 25 (41) students – corresponding to 4.7 (4.2) full time equivalent students – have participated in placements at one of KTH's proposed practice schools within the framework of the above-mentioned partnership agreement on practice-based research. In total, KTH had the equivalent of 32.3 (34.7) full time equivalent students participating in placements in 2024. This means that around 15 per cent of the placements have taken place at one of KTH's proposed practice schools.

Compared to 2023, more students have participated in placements worth 9 to 15 credits, while fewer students have participated in placements worth fewer than 9 credits. As in the previous year, most of the students who participated in activities in 2024 did so within the framework of the Master of Science in Engineering and Education programme. Other students have participated within the framework of KTH's various forms of bridging teacher education.

In 2024, students participated in placements at Fredrika Bremergymnasiet, Söderbymalmskolan and Ribbyskolan in the municipality of Haninge, Hersby gymnasium in the municipality of Lidingö, Nynäshamn gymnasium in the municipality of Nynäshamn, Gustavsbergs gymnasium, Värmdö tekniska gymnasium and Hemmestaskolan in the municipality of Värmdö, Thorildsplans gymnasium, Kärrtorps gymnasium and Stockholm Science and Innovation School in the City of Stockholm, and at NTI Vetenskapsgymnasiet Stockholm, an independent school.

KTH is continuing to work with challenges linked to the need for increased coordination between school placements that take place via practice schools and those that take place via what is known as the VFU portal. This portal is governed by a collaboration agreement between universities and municipalities in Greater Stockholm.

KTH forecasts that an increased number of students will be able to participate in activities for students on school placements with the partner and practice schools in 2025 thanks to the cooperation initiated with NTI Gymnasiet. However, the forecast is uncertain, as the process of signing agreements with practice schools is still ongoing.

Lifelong learning and transition

KTH is conducting a development initiative to increase and develop lifelong learning. KTH is endeavouring to make this an integral part of the courses and study programmes offered at KTH. Lifelong learning refers to both contract education and continuing professional development with direct government funding and other, more informal learning activities such as open, flexible online courses and open lectures. Priorities and assessments are based mainly on student demand, labour market needs and KTH's existing competence, but are also based on the government's initiatives such as the lifelong learning initiative, redeployment study funding and bridging teacher training.

KTH has continued to develop continuing professional development with direct government funding during the year, in the form of courses and concepts that are scalable, effective and attractive. The format aims to be flexible and accessible to suit the target group of professionals. KTH is continuing to maintain close dialogue with companies and organisations in this work. KTH is working to develop more far-reaching and operation-integrated cooperations on education and lifelong learning together with strategic partners.

In 2024, KTH continued its efforts to facilitate the development of lifelong learning through aspects such as common working methods and support functions. Each school has a lifelong learning officer who works as part of a KTH-wide network.

Continuing professional development with direct government funding

In total, KTH offered 286 (224) in-service training courses, which generated 728 (384) full time equivalent students of students with direct government funding in 2024.

The number of unique individuals who have taken at least one in-service training course has increased over the last few years. There were 9,240 unique participants in 2024, of whom 23 were students funded by fees, compared to 4,445 in 2023 and 2,521 in 2022. This corresponds to an increase of more than 100 per cent in the number of participants between 2023 and 2024.

By gender, the number of unique participants was 5,283 women and 3,957 men; that is, 57 per cent women and 43 per cent men. In terms of full time equivalent students, 381 were women and 348 men; that is, 52 per cent women and 48 per cent men. This indicates that men are more likely than women to enrol in more than one course, and that men are more likely to enrol in the longer courses worth more than four credits.

The number of participants was significantly higher for distance learning courses offered, rather than for courses offered on campus: 8,599 distance learning participants and 922 on-campus participants. Courses with a scope of four credits or fewer and that were delivered as distance learning courses had the highest number of participants. These courses had a total of 7,047 participants in 2024.

As part of KTH's direct government funding for education at first and second-cycle level, SEK 11,484,000 has been earmarked for a special lifelong learning initiative where the courses and programmes offered aim to focus on education promoting climate transition.

Courses offered on topics that promote climate transition included:

- *Batteries, 5 credits*
- *Digital Transformation and Sustainable Development, 4 credits*
- *Sustainable Development for Problem Solvers:*
- *Exploring Sustainable Development, 3 credits*
- *The Climate Crisis as a Societal Problem, 7.5 credits*
- *Environmental Physics, 9 credits.*

Contract education

KTH has trained staff from companies and public authorities in fields such as estate agency, property valuation, building technology, AI, Lean and industrial production, sustainable transport systems, radio systems technology, and cyberdefence and information security. In 2024, KTH's credit-bearing courses in contract education generated 82 (45) full time equivalent students and 74 (57) annual performance equivalents.

Cooperation with Scania on lifelong learning continued during the year with the joint steering committee for learning as a platform. A more informal and operation-specific learning process for selected staff at Scania was evaluated previously. Development has continued, and in 2024 AI for supervision and feedback for participants has been evaluated for this format.

Short courses

In 2024, teachers at KTH have developed a total of eleven courses for professionals. Examples of courses specialising in green transition, batteries and technology are:

- *Deep Renovation – Renovation to Achieve Climate Goals*
- *Energy Performance and Indoor Climate in Cultural Heritage Buildings*
- *Batteries for Energy Storage in Electrical Systems*
- *Risk and Reliability Analysis in Electricity*
- *Battery Thermal Management Systems and Safety*
- *On the future of nuclear power.*

These courses will begin in 2025. The materials developed can be used in various training formats such as open online training, continuing professional development with direct government funding and contract education. See the section entitled *Financial summary*.

Integration initiatives

Swedish for Engineers and Architects

The Intensive Swedish for Engineers and Architects (Sfinx) programme in the county of Stockholm has been part of KTH's regular activities since 2011. Its aim is to facilitate entry into the labour market for engineers and architects who hold foreign degrees and have been in Sweden for no more than three years. Sfinx is part of the regional cooperation Swedish for Professionals.

Until spring 2024, Sfinx was a collaboration between KTH, the municipality of Järfälla, the City of Stockholm, the Stockholm County Administrative Board and the Swedish Association of Graduate Engineers. The municipality of Järfälla began a course in intensive Swedish for university graduates from autumn 2024, and has therefore ended its collaboration with Sfinx. The Swedish Association of Graduate Engineers, which previously offered a mentoring programme for Sfinx participants, has also ended its collaboration with Sfinx as of autumn 2024. From the end of 2024, the collaboration will thus involve KTH, the City of Stockholm and the Stockholm County Administrative Board. Sfinx participants who wished to continue their education were given the opportunity to do so within the City of Stockholm.

Participants spend 18 months learning English and Swedish, from Swedish for immigrants level up to and including upper secondary level. They also receive information about the Swedish business community and the Swedish labour market. This takes place within the municipal adult education programme. Reports are integrated into Swedish lessons and contribute to the grade in Swedish.

Participants also have the opportunity to participate in the teaching of courses at KTH without being registered. There were 30 course participants on the Sfinx programme at KTH in 2024, out of a total of 150 participants. The corresponding number of participants last year was 40, out of a total of 120 Sfinx programme participants.

A large number of participants find work during the programme, or after its completion.

Bridging programme for architects and engineers who have completed foreign qualifications

KTH has established bridging programmes for architects and engineers within the scope of the remit. These programmes comprise 120 credits and include general vocational courses such as law, social sciences, communication, sustainable development, entrepreneurship and leadership, as well as subject-specific advanced courses. The aim is to provide anyone who has completed a foreign degree programme in architecture or engineering with the supplementary knowledge they need to practise the profession in Sweden. These programmes do not culminate in a degree.

KTH admitted students to both versions of the study programme in the spring and autumn semesters of 2018 and 2019. KTH decided to discontinue admission for studies starting in the 2020 spring semester as there were insufficient numbers of qualified applicants for the programmes.

The programme for architects had no active students in 2024. However, one student in the programme contacted us during the year and asked to complete the programme in 2025.

The programme for engineers had one student from the 2019 admissions round that generated no full time equivalent students and less than one annual performance equivalent.

No students have provided formal notification of non-completion of studies in 2024. A number of students have not been active or studied higher education credits, but they have not formally declared that they have discontinued their studies.

Three students have completed the full study programme for architects to date. No students have completed the entire study programme for engineers. See previous annual reports for other performance in previous years.

A small number of students at KTH have studied about 90–110 higher education credits in these two programmes and have the opportunity to complete their studies in 2025.

Recruitment of students to first-cycle programmes

KTH's ambition is for technical education at KTH to be emphasised as a natural choice for young people who want to contribute to the sustainable development of society. The personal encounter between KTH representatives and prospective students is prioritised in the recruitment process. This is mainly done through what are known as student ambassadors, about 45 in number, who are KTH's representatives in meetings with upper secondary school students and represent most of KTH's programmes. The student ambassadors reflect the diversity of KTH in terms of gender, geographical origin, ethnicity and social background. All student ambassadors under-go training that includes communicating with young people, presentation techniques, student recruitment messages, target group knowledge and one-on-one coaching.

In 2024, KTH's student ambassadors conducted 134 student recruitment meetings with upper secondary school classes by visiting upper secondary schools, and when upper secondary school students made study visits to KTH. Of the student recruitment meetings held, 24 were organised with priority upper secondary schools. The schools identified by KTH as priorities are upper secondary schools in Mälardalen where the proportion of pupils from homes with poor study skills is higher than the average in the county of Stockholm, and upper secondary schools in the rest of the country that are located in municipalities where few students make the transition to university college. This is part of KTH's efforts to broaden recruitment.

In the autumn of 2024, KTH had a stand at two major education fairs: Kunskap & Framtid in Gothenburg and the Saco Student Fair in Stockholm. The purpose of participating in these fairs is partly to attract interest in studying at KTH and partly to inspire visitors to search even after the fair for more information about courses and study programmes offered at KTH. KTH held seminars at both fairs that were attended by a total of 662 people.

The KTH website and face-to-face meetings, such as visits to upper secondary schools, are the most important channels for reaching the target group before they choose their programmes. Advertising in social media channels and search engine optimisation have taken place in order to increase the target group's awareness of KTH and drive traffic to the KTH website during the application period.

Every year, KTH organises an Open Day to provide information about KTH's programmes in the learning environment.

In 2024, an Open Day was organised at the end of March. The event was open to the general public, promoted through ads on social media and mailings to upper secondary schools in the Mälardalen region and was attended by over 2,100 people.

About half of the participants in KTH's various student recruitment activities are women. The gender distribution is also equal in KTH's direct target group, second and third-year upper secondary students studying on natural and technological science programmes. One of KTH's challenges is that some educational environments and programmes have a major imbalance between men and women. To reach out to prospective female students, KTH's advertising has focused on ensuring that as many men as women are reached. Additionally, KTH is organising *Introduce a Girl to Engineering Day* together with the Womengineer Foundation.

KTH is working to increase awareness and interest among children and young people in technology, natural sciences and mathematics and create an understanding of how these subjects are necessary for the transition to a sustainable society. The House of Science, a meeting place for schools, universities and industry, is the hub for this work, and reaches a large number of students every year thanks to its activities. The House of Science is run by KTH and Stockholm University, together with the City of Stockholm as a long-term partner. The House of Science offers supervised activities in biology, physics, chemistry, mathematics and technology at laboratories at the AlbaNova campus and the Bergianska trädgården botanical garden. The activities are often supervised by students from the university who act as role models for the pupils. The House of Science also offers continuing professional development for teachers and weekend and holiday courses for young people, and hosts events such as Teknikåttan and European Researchers' Night. It also focuses on developing activities for broader recruitment, including outreach initiatives and business cooperation, to make it possible to reach out to more young people from areas where higher education traditionally has low representation.

Recruitment of students to second-cycle study programmes

KTH recruits students both nationally and internationally. International degree programme students are recruited mainly to KTH's two-year Master's programmes, which are all taught through the medium of English.

KTH has attracted more and more qualified applicants to second-cycle level studies in recent years. The main reasons why students chose KTH over other universities were KTH's ranking, the quality of the education provided, the content of the programmes and Stockholm as a study destination.

Activities to raise awareness of KTH

KTH advertises in digital channels in selected countries in order to reach out to prospective international students. A separate advertising campaign has been targeted at prospective female students in order to achieve a more equal gender balance in KTH's courses and study programmes.

KTH participated in a number of fairs and events during the year in order to establish contact and communicate with prospective students. Digital fairs were organised mainly by the Swedish Institute together with other Swedish universities. Additionally, KTH held its own digital events aimed at partner universities and other partners in a number of countries.

KTH uses recruitment agents in Colombia, Indonesia, Thailand and Vietnam to increase its local presence and support for applicants in those countries. All agents work on a commission basis. Of the new students registered in 2024, 13 (5) were recruited via agents.

KTH has several partnership agreements with scholarship organisations in Latin America and Indonesia. One of these is an Indonesian funding body, the Indonesia Endowment Fund for Education, which provided scholarships to 37 (14) new students in 2024.

As in previous years, students from almost all two-year Master's programmes were hired to communicate with prospective students via email, social media and digital events.

Communication with applicants and admitted students

KTH offered around twenty webinars for prospective international students during the recruitment cycle. Topics included a presentation of KTH, two-year Master's programmes in various subject areas, frequently asked questions in connection with application, and preparations prior to arrival. Around 20 programme-specific digital meetings with academics and student ambassadors were also offered in the autumn. All webinars and digital events were interactive and offered opportunities to ask questions of staff and student ambassadors. Some webinars were recorded and posted on YouTube and the KTH website.

For 2024, admitted students were offered an app where they can connect and communicate with one another. Over 3,000 students used the app in 2024. KTH also carried out targeted communication aimed at students nominated for KTH's scholarship programme with a view to encouraging more of them to choose KTH.

Demand for KTH study programmes

Demand for KTH study programmes leading to a professional qualification remains high. The total number of first choice applicants for these programmes in 2024 was 6,425 (6,139).

The most popular Master of Science in Engineering programmes were industrial economics with 826 (651) first choice applicants, computer engineering with 626 (679) and engineering physics with 432 (402). The architecture programmes had 824 (989) first choice applicants.

Of the Bachelor of Engineering programmes, civil engineering and design had the most first choice applicants, 208 (230).

KTH has an English-language first-cycle programme, the Bachelor's programme in information and communication technology. In 2024, the programme had 1,272 (1,468) first choice applicants. There were 503 (551) first choice applicants in the national admissions round and 847 (976) in the admissions round for English-language programmes, of whom 78 (59) people applied in both admissions rounds. This shows a continued strong interest in English-language programmes at first-cycle level.

The number of applications for one and two-year Master's programmes taught through the medium of English remains high. Of the 25,760 (25,465) online registrations for the English-language second-cycle programmes for the 2024 autumn semester, 19,671 (20,249) came from students required to pay tuition fees, of whom 6,933 (6,727) paid the application fee.

Admissions to EIT Digital and EIT Urban Mobility are managed through the EIT's admissions portals. The EIT Digital programme received a total of 1,250 (786) applications. The EIT Urban Mobility programme received a total of 352 (251) applications. See the section entitled *Collaborations*.

The qualifying programmes had a total of 2,053 (1,346) first choice applicants in 2024, a significant increase from the previous year. This is partly explained by the fact that KTH also offered the second semester of the technology foundation year in the spring semester of 2024, at both KTH Campus and KTH Södertälje. In 2023, KTH only offered a technology foundation year in semester 2 in the autumn semester, at KTH Flemingsberg. There were also more first choice applicants for the regular technology foundation year than in the previous year, at KTH Campus, KTH Flemingsberg and KTH Södertälje.

Admission to KTH study programmes takes place in nationally coordinated admissions rounds in the joint admissions database for higher education in Sweden, which is managed by the Swedish Council for Higher Education.

Activities funded by tuition fees

Activities funded by tuition fees bring in a large number of students with non-European educational backgrounds and help to promote diversity and internationalisation. These activities have a major influence the planning of courses and study programmes, which means that discussions on the dimensioning of education, particularly at second-cycle level, have to be ongoing. KTH has made efforts to recruit qualified international students since fees were introduced. See the section entitled *Recruitment of students to second-cycle study programmes*.

The number of applicants to KTH's English-language programmes increased in 2024 for both first and second-cycle programmes.

There was a break in the trend in the number of registrations of students required to pay tuition fees at second-cycle level, with a higher proportion of students admitted starting their studies compared to the previous year. See the section entitled *Demand for KTH study programmes*.

The number of students required to pay tuition fees who applied to defer the start of their studies was on a par with the previous year, 5 (6). The number of admitted students requesting a refund of tuition fees was slightly lower than in the previous year, 61 (66).

As well as the basic arrival and induction services, students who paid tuition fees were offered guaranteed accommodation, free primary healthcare, extended insurance cover and preparatory courses in English and Swedish.

Activities relating to the education of students required to pay tuition fees showed a result of SEK -5.9 (-2.2) million in 2024. There has been a large increase in revenue due to an increase in the number of students, while costs have increased at a slightly higher rate. At the end of 2024, the organisation had an accumulated surplus of SEK 25 million, compared to SEK 31 million at the end of 2023. See the section entitled *Financial summary*.

The following tuition fee levels applied to programmes starting in the 2024/2025 academic year. The fee for first-cycle courses and study programmes and Years 1 to 3 of the Master of Science in Engineering programme and the Master of Arts/Science in Education programme was SEK 134,000 per academic year. The fee was SEK 226,000 per academic year for architecture programmes (Years 1 to 3) and first-cycle courses in architecture. The fee was SEK 286,000 per academic year for Years 4 and 5 and second-cycle study programmes and courses in architecture. The tuition fee for other second-cycle study programmes and courses was SEK 171,000 per academic year. Study programmes delivered in cooperation with other universities may have different fee levels.

Cooperation with the Swedish Migration Agency

As part of a government mandate, universities and higher education institutions have worked together with the Swedish Migration Agency on implementing measures to develop and streamline efforts to ensure that abuse of residence permits for higher education studies is made more difficult. The final report on the mandate was issued by the Swedish Migration Agency in 2024, but the collaboration continues and includes issues relating to residence permits for doctoral students. The pilot project on two-year residence permits and study intentions conducted by the Association of Swedish Higher Education Institutions and the Swedish Migration Agency in 2019–2023 resulted in KTH and the Swedish Migration Agency being able to conclude an agreement on interruption reporting and two-year permits for degree programme students in the spring of 2024.

KTH tells students what rules apply when applying for residence permits and, if necessary, acts as a link between the student and the Swedish Migration Agency. For students required to pay tuition fees, the Swedish Migration Agency checks against KTH's study documentation system to ensure that the tuition fee has been paid.
Processing times for residence permit applications in 2024 were acceptable for new incoming students in most cases, but there was considerable variation. Some groups found that the processing time was still too long for them to begin their studies. This caused problems for some incoming students in that they were not informed of how long it would take to receive a decision on their residence permit.

A persistent problem in 2024 was the fact that students as part of partnership agreements who are only studying the second year of their programmes at KTH are allowed a twelve-month residence permit at most, which means that they cannot get a Swedish civic registration number. This causes problems for students and increases the administrative burden on KTH.

Assessment of prior learning

KTH has a working group that works with applications and questions regarding validation of prior learning. The KTH website was updated during the year with current information regarding prior learning and validation for admission and credit transfer. KTH participates in two national validation networks for engineers.

It is difficult to draw the line between what is a matter for prior learning, what constitutes an exception and what constitutes entry requirements through formal qualifications other than those specified in the relevant course and programme syllabus. The largest proportion of assessments of alternative qualifications takes place on an ongoing basis in each admissions round, when all alternative qualifications linked to the individual's application account are to be considered. Formal applications for assessment of prior learning are less frequent. Around 100 applications were received in 2024, distributed over the various admissions rounds.

Alternative selection

In the 2024 autumn semester, KTH has used the mathematics and physics exam and the architecture exam as an alternative selection for up to one third of the places on a number of Master of Science in Engineering programmes and the architecture programme.

The mathematics and physics test is a joint entrance test

for a few selected programmes at KTH, Chalmers University of Technology, the University of Gothenburg and Stockholm University. This means that anyone who is eligible for the programme and passes the test participates in an additional selection group in addition to their secondary school grades and the Swedish Scholastic Aptitude Test.

The architecture test is an entrance test for architecture programmes at KTH, Chalmers University of Technology, Lund University and Umeå University. There are three different selection groups for architecture programmes: grades, the Swedish Scholastic Aptitude Test and architecture tests. In the selection procedure for the four architecture programmes, up to one-third of places for beginners go to students who have passed the architecture test.

The number of applicants in the selection group for the mathematics and physics test for 2024 was as follows: Engineering Physics 47 (44), Electrical Engineering 2 (3), Vehicle Engineering 4 (3), Engineering Mathematics 25 (20), Design and Product Development 1 (1) and Mechanical Engineering 3 (3). The architecture programme admitted 44 (43) applicants from the selection group for the architecture test.

Beginners

In 2024, a total of 3,123 (2,853) beginners started studying on KTH's degree programmes leading to a professional degree. The architecture programme had 118 (108) beginners, the Master of Science in Engineering programmes had 2,173 (2,035) beginners and the Bachelor of Science in Engineering programmes had 765 (647) beginners. The bridging teacher education programmes had 67 (63) beginners. See *Figure 2*.

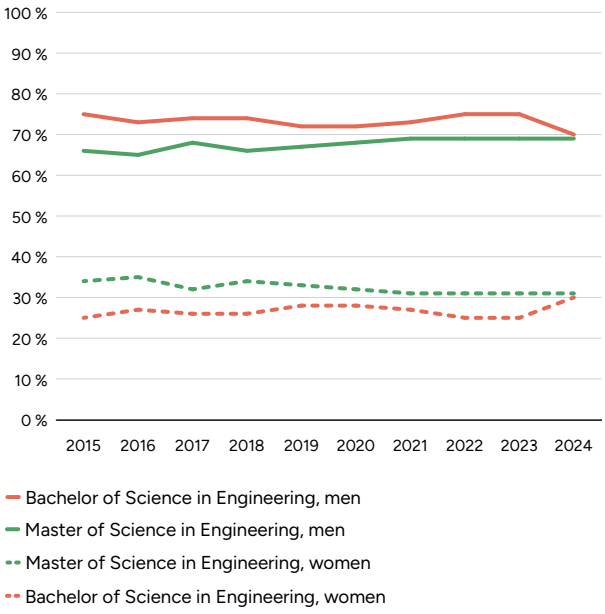
The two final years of the Master of Science in Engineering programmes are also two-year Master's programmes. This means that students studying for a Master of Science in Engineering are registered as beginners on a two-year Master's programme when they start the fourth year of their Master of Science in Engineering. This does not apply to the Master of Science in Engineering and Education programme, which is a combined five-year programme. 75 (71) beginners started the Master of Science in Engineering and Education programme in 2024.

In addition to the fourth and fifth years of the Master of Science in Engineering programme, KTH has externally recruited students for the two-year Master's programmes who come from other universities in Sweden, other EU/EEA countries or Switzerland. These students do not pay tuition fees. KTH has also externally recruited students for the two-year Master's programmes from other parts of the world. These students pay tuition fees for their studies.

There were 2,884 (2,393) beginners for two-year Master's programmes in total. Of these, 1,155 (1,051) were already students on the Master of Science in Engineering programme. In 2024, 808 (760) externally recruited programme beginners from other universities in Sweden and the EU/EEA, including

Switzerland, commenced their second-cycle studies, of whom 35 (38) per cent were women and 65 (62) per cent men.

Figure 1. Gender structure – new female and male students 2015–2024 in percent



Source: Ladok.

In 2024, KTH had admissions to a one-year Master's programme in lighting design that had 18 (32) beginners. Of the total number of beginners in 2024, 34 per cent were women and 66 per cent were men. On the Master of Science in Engineering programmes in the 2024 autumn semester, 31 per cent were women and 69 per cent were men. Of beginners on the Bachelor of Science in Engineering programmes in 2024, 30 per cent were women and 70 per cent were men. The distribution between men and women differs greatly between the various KTH programmes. See *Figure 2*.

Several degree programmes have a low percentage of female students. KTH is taking several measures to broaden recruitment: see the section entitled *Recruitment of students to KTH's first-cycle programmes*.

The median age of beginners on the Architecture programme was 21 for women and 24 for men. The median age of beginners on the Master of Science in Engineering programmes was 20 for both men and women. The median age of beginners on the Bachelor of Science in Engineering programmes was 21 for both men and women. The median age for one and two-year Master's programmes was 24 for both men and women.

The median age for qualifying programmes was 20 for both men and women. The median ages have remained stable over time.

In addition to the admission of beginners in Year 1, some programmes also offer the opportunity to start at a later point in the programme. The number of students from universities other than KTH who started the later parts of a Master of Science in Engineering was 153 (147). The corresponding number for Bachelor of Science in Engineering programmes was 5 (5), and for two-year Master's programmes 143 (141).

877 (763) students started the qualifying courses in 2024; with 31 per cent women and 69 per cent men: see *Figure 2*. Of students who started on the qualifying programmes in the

Figure 2. Total number of new students 2021–2024

	2024		2023		2022		2021	
	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men
Master of Architecture, Degree Programme 300 HE credits	**118**	**55/45**	**108**	**59/41**	**117**	**46/54**	**114**	**60/40**
Master of Science in Engineering Degree Programme 300 HE credits								
Biotechnology	94	67/33	94	73/27	82	56/44	85	73/27
Engineering and Education	75	47/53	71	41/59	62	40/60	54	37/63
Computer Science and Engineering	222	19/81	218	16/84	201	18/82	194	21/79
Design and Product Realisation	116	45/55	116	52/48	110	45/55	109	53/47
Electrical Engineering	113	19/81	102	15/85	87	20/80	95	13/87
Energy and Environment	95	52/48	87	46/54	73	47/53	78	49/51
Vehicle Engineering	126	13/87	118	14/86	89	9/91	96	14/86
Industrial Engineering and Management	174	22/78	163	31/69	159	30/70	156	34/66
Industrial Technology and Sustainability	67	34/66	45	27/73	37	32/68	39	18/82
Information and Communication Technology	89	26/74	67	18/82	72	17/83	67	19/81
Mechanical Engineering	163	14/86	154	17/83	136	14/86	145	15/85
Materials Design and Engineering	63	43/57	59	39/61	51	24/76	53	23/77
Medical Engineering	53	58/42	50	60/40	51	51/49	38	55/45
Media Technology	74	53/47	79	29/71	88	43/57	80	31/69
Civil Engineering and Urban Management	199	37/63	173	36/64	190	43/57	172	47/53
Engineering Physics	153	20/80	146	18/82	129	20/80	148	15/85
Engineering Chemistry	77	57/43	84	46/54	66	61/39	73	58/42
Engineering Mathematics	79	20/80	68	21/79	64	16/84	57	18/82
Open entrance	141	25/75	141	27/73	106	33/67	113	26/74
Sub-total	**2,173**	**31/69**	**2,035**	**31/69**	**1,853**	**31/69**	**1,852**	**31/69**
Bachelor of Science in Engineering, Degree programme 180 HE credits								
Constructional Engineering and Design	214	42/58	207	33/67	210	31/69	236	38/62
Computer Engineering	191	24/76	197	19/81	186	17/83	199	17/83
Electronics and Computer Engineering	43	12/88	43	16/84	41	12/88	51	20/80
Electrical Engineering	51	2/98	60	3/97	51	12/88	63	14/86
Industrial Technology	107	19/81	-	-	-	-	-	-
Industrial Technology and Production Maintenance	-	-	-	-	16	19/81	18	28/72
Chemical Engineering	60	52/48	46	52/48	47	49/51	51	55/45
Mechanical Engineering	-	-	-	-	65	12/88	100	11/89
Medical Engineering	47	53/47	52	25/75	42	40/60	37	49/51
Engineering and Economics	52	31/69	42	26/74	57	37/63	60	30/70
Sub-total	**765**	**30/70**	**647**	**25/75**	**715**	**25/75**	**815**	**27/73**
Subject Teacher Education in Technology, Secondary Education 270 HE credits	**-**	**-**	**-**	**-**	**-**	**-**	**6**	**0/100**
Supplementary teacher education 60 HE credits	**26**	**50/50**	**19**	**42/58**	**8**	**38/62**	**-**	**-**
Supplementary teacher education 90 HE credits	**29**	**45/55**	**9**	**56/44**	**35**	**43/57**	**65**	**37/63**
Supplementary teacher education for Graduates with a third cycle degree 90 HE credits	**12**	**25/75**	**35**	**43/57**	**14**	**36/64**	**-**	**-**
Master's programmes								
Master's programmes 120 HE credits	2,884	36/64	2,393	35/65	2,168	35/65	2,279	38/62
of which within Master of Science in Engineering programmes	*1,155*	*34/66*	*1,051*	*35/65*	*970*	*33/67*	*1,122*	*37/63*
Master's programmes 60 HE credits	18	78/22	32	66/34	41	56/44	66	65/35
Sub-total	**2,902**	**36/64**	**2,425**	**36/64**	**2,209**	**36/64**	**2,345**	**39/61**
Bachelors programmes 180 HE credits	**141**	**43/57**	**144**	**45/55**	**120**	**37/63**	**119**	**32/68**
University Diploma programmes 120 HE credits	**-**	**-**	**-**	**-**	**31**	**19/81**	**31**	**35/65**
Technical Preparatory Year, Technical Preparatory Semester 60/30 HE credits	**877**	**31/69**	**763**	**31/69**	**776**	**29/71**	**1,092**	**32/68**
Total	**7,043**	**34/66**	**6,185**	**32/68**	**5,878**	**32/68**	**6,439**	**34/66**

Source: Ladok.

autumn semester of 2023 or spring semester of 2024, a total of 298 (222) students – or 36 (31) per cent – have continued with a Master of Science in Engineering or Bachelor of Science in Engineering programme at KTH in 2024. Of these students, 29 per cent are women and 71 per cent are men. Most students who continue their studies at KTH pursue a Master of Science in Engineering.

914 (667) new fee-paying students were registered at KTH in the autumn semester of 2024, of whom 35 per cent were women and 65 per cent were men. Of the new fee-paying students, 92 (45) were awarded scholarships from Swedish organisations or through scholarship programmes where KTH has an agreement on scholarship funding.

International mobility

KTH is constantly working to encourage more students to undertake part of their education abroad. All students are offered different types of exchange opportunities through KTH's many educational partnerships, exchange agreements and international partnerships.

672 (653) students started studying abroad in 2024. The most common countries for studying abroad in 2024 were France, Switzerland, Singapore and the US.

There continues to be considerable interest in studying as an exchange student at KTH. 1,130 (1,101) exchange students began their studies at KTH during the year. Within Europe, most students came from universities in Germany, Switzerland, France and Spain. Of the incoming exchange students, 387 (380) came from outside the EU/EEA and Switzerland, most of them from Singapore, China, Japan and the US.

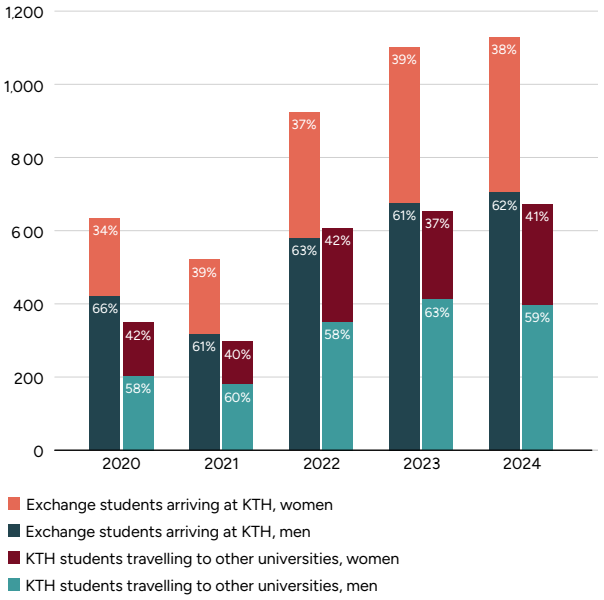
KTH Global is the annual event that highlights the international opportunities offered to KTH students. For five days, students had the opportunity to take part in a talk show about studying abroad and information on various countries and mobility programmes.

Double degree

In addition to exchange students, KTH has a relatively large group of incoming double degree students under special partnership agreements with universities in Europe and Japan. A collaborative agreement with Australia is also being developed. These students study at second-cycle level for 18 months to two years, including degree projects, and are then able to obtain a Degree of Master of Science in Engineering from KTH and an equivalent degree from their home university. 82 (140) double degree students began studying at KTH during

Figure 3. Student exchange 2020–2024

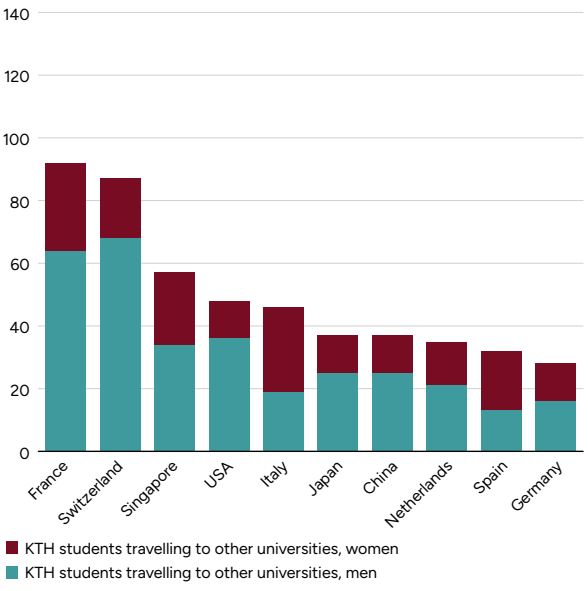
Number of students who began student exchange per year, in absolute numbers and proportion of women and men in percent



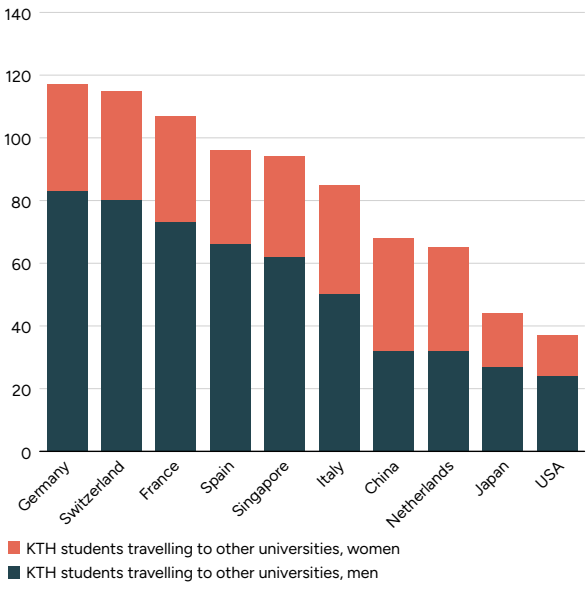
Source: Ladok.

Figure 4. Student exchange – most popular countries 2024

Number of students who began student exchange during the year: the most popular countries KTH students travel to



Number of students who began student exchange during the year: the most popular countries exchange students originate from



Source: Ladok.

the year. KTH's degree programme students show less interest in double degrees. In 2024, one KTH student (three KTH students) started double degree studies abroad.

Placements

Placements, mainly through Erasmus, provide another opportunity for KTH students to obtain international experience. 54 (109) KTH students started Erasmus placements at companies or organisations in Europe during the year. The decrease from last year is due to the fact that double degree students are no longer granted Erasmus traineeships when doing their degree projects in the country in which their home university is located. The most popular countries for traineeships were Germany, the Netherlands, Belgium and France.

KTH Field Studies

As of 2024, KTH is offering KTH Field Studies, a travel grant for degree projects in low and middle-income countries, as the Swedish International Development Cooperation Agency's Minor Field Studies scholarship programme has been discontinued. 74 applications were received for the spring semester, and of these, 32 students were granted KTH Field Studies travel grants.

KTH-NOC Singapore

KTH has been working with the National University of Singapore (NUS) on the KTH-NOC partnership since 2005 on placements at start-up companies in combination with courses. KTH sent seven students under the programme in the spring semester. 21 students from NUS started the programme at KTH in 2024.

Performance

The number of full time equivalent students and annual performance equivalents, offset against public funding, who were studying at first and second-cycle level in 2024 totalled 13,969 (12,903) and 11,219 (10,545) respectively. The sharp increase of more than 1,000 full time equivalent students is a result of KTH actively working to increase the education volume in 2023 and 2024. Some of the examinations for the autumn semester are always scheduled late in December. For 2024, 536 (415) annual performance equivalents were enrolled for examinations that took place in December 2023.

Of the total number of full time equivalent students on courses and study programmes with direct government funding, 76 per cent studied in the engineering disciplinary domain and 16 per cent in natural sciences.

The humanities, law and social sciences disciplinary domains accounted for about 6 per cent of KTH's total number of full time equivalent students. Moreover, KTH has a small proportion of programmes in the disciplinary domain of design, teaching and placement.

According to the 2024 public service agreement, KTH had the opportunity to offset a maximum of 143 full time equivalent students and annual performance equivalents against the disciplinary domain of design. However, the design domain included 389 (399) full time equivalent students and 316 (365) annual performance equivalents for 2024. The full time equivalent students and annual performance equivalents in excess of 143 were offset against the disciplinary domain of technology.

The performance indicator for education at first and second-cycle level was 80 (82) per cent, calculated as the number of annual performance equivalents in relation to the number of full time equivalent students. The performance indicator is remaining relatively stable over time, but has fallen by one percentage point per year for 2021–2023 and by 2 percentage points from 2023 to 2024. The decrease between 2023 and 2024 is largely due to the fact that the number of full time equivalent students in freestanding courses increased significantly during the year, which is a type of education with a significantly lower performance indicator than KTH's programme-based courses. In architecture, the performance indicator dropped from 91 to 86 per cent compared to the previous year; but the performance indicator for Master of Science in Engineering programmes remained the same as last year, at 85 per cent. The performance indicator in the Bachelor of Engineering programme has increased by 1 percentage point per year between 2021 and 2024, from 81 to 84 per cent.

The proportion of women among full time equivalent students was 41 (37) per cent and the proportion of men was 59 (63) per cent, which means a 4 percentage point increase in the proportion of women compared to the previous year. In this case also, the increase in the number of full time equivalent students in freestanding courses affects the outcome, as more than 50 per cent of these students were women: see *Figure 7*.

The proportion of women on the Master of Science in Engineering programme was 31 per cent, and for men 69 per cent. As in previous years, the proportion of women on the architecture programme was higher than for most other KTH programmes, with 59 per cent women and 41 per cent men. The gender difference for the Bachelor of Science in Engineering programme was greater than for most of KTH's other programmes: 28 per cent women and 72 per cent men: this is, however, an increase in the proportion of women by 1 percentage point compared with the previous year. The two-year Master's study programme had 35 per cent women and 65 per cent men. The students for the qualifying programme were 31 per cent women and 69 per cent men. With the exception of the freestanding courses, the percentage distribution between women and men has remained stable between 2021 and 2024. See *Figure 7*.

In addition to the performances offset against public funding, students required to pay tuition fees generated 1,231 (1,052) full time equivalent students and 1,062 (951) annual performance equivalents in 2024. This corresponds to a performance indicator of 86 (90) per cent. See *Figures 8*. For 2024, 59 (53) annual performance equivalents were enrolled for examinations that took place in December 2023.

KTH had a total of 2,017 (1,710) fee-paying degree programme students in 2024, of whom 35 per cent were women and 65 per cent were men.

Of these, 214 (194) were scholarship holders funded by Swedish or KTH-affiliated scholarship programmes, corresponding to about 11 (11) per cent of fee-paying degree programme students. The gender breakdown among scholarship holders was 38 per cent women and 62 per cent men. There were also 47 (29) paying students on freestanding courses, of whom 32 per cent were women and 68 per cent men. The majority of fee-paying students therefore pay their own fees. To some extent, they may also be funded through scholarship programmes for which KTH holds no information.

Degrees

In 2024, KTH awarded 1,206 (1,134) Degrees of Master of Science in Engineering, 111 (70) Degrees of Master of Architec-

ture, 369 (309) Degrees of Bachelor of Science in Engineering and 810 (679) Degrees of Bachelor of Science. KTH awarded 1,819 (1,487) Degrees of Master of Science (120 credits) and 44 (38) Degrees of Master of Science (60 credits). See *Figure 9*.

Many students take more than one degree based on the same studies, and this has been the case for many years. In 2024, 548 (539) students graduated with one or more additional degrees in combination with a Degree of Master of Science in Engineering. Most of them graduated with a Degree of Master of Science in Engineering in combination with a Degree of Bachelor of Science and a Degree of Master of Science. In relation to the total number of Degrees of Master of Science in Engineering, the proportion was 45 (48) per cent. Of those who graduated with a Degree of Master of Science, 519 (494) were awarded a Degree of Master of Science in Engineering in 2024 or earlier. KTH thus awarded 1,300 (993) Master's degrees to students who had not graduated from KTH with a Degree of Master of Science in Engineering. See *Figure 9*.

Of all the Degrees of Bachelor of Science awarded, 671 (555) were awarded to students studying on the Master of Science in Engineering programme, and 31 (33) to students on the Architecture programme. 81 (68) students completed one of KTH's three Bachelor's programmes. In addition, 27 (23) students graduated with a Degree of Bachelor without having followed a degree programme.

KTH also awards Master's degrees jointly with other universities. 59 (45) Degrees of Master were awarded jointly with other universities in 2024, of which 11 (16) were awarded to fee-paying students.

In 2024, a total of 657 (530) degrees were awarded to students who have paid tuition fees for their studies at KTH. Of these, 3 (0) were Degrees of Master of Science in Engineering, 19 (20) were one-year Degrees of Master, 620 (500) were two-year Degrees of Master, 10 (6) were Degrees of Bachelor, 4 (4) were Degrees of Bachelor of Science in Engineering and 1 (0) was a Degree of Master of Arts/Science in Education. These degrees are included in the data presented above.

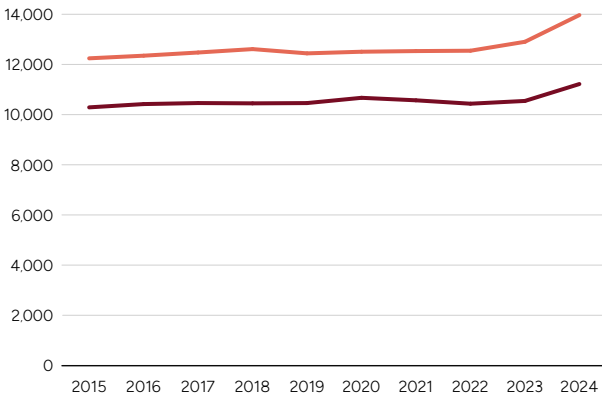
Women accounted for 34 per cent of students graduating with Degrees of Master of Science in Engineering, while men accounted for 66 per cent. The proportion of women awarded Architecture degrees was 58 per cent, and for men 42 per cent. See *Figure 9*.

KTH awarded 77 (66) Degrees of Master of Arts/Science in Education in 2024. In total, KTH has awarded 269 teaching degrees between 2021 and 2024. These were issued upon completion of the Master of Science in Engineering and Education programme, for the Master of Arts/Science in Secondary Education, specialising in technology, for bridging teacher training programmes (60 or 90 credits), or for bridging teacher training programmes for students holding third-cycle qualifications. 49 per cent of students awarded Degrees of Master of Arts/Science in Education in 2024 were women, and 51 per cent were men. Over the four-year period as a whole, the proportion of women was 53 per cent, and of men 47 per cent. See *Figure 9* and the section entitled *Teacher training programmes*.

Career support

KTH offers support to students at all levels as they make the transition to the world of work. In 2024, KTH has offered one-on-one career coaching and reviews of CVs and cover letters and held lunchtime seminars on the topic of careers. Lunchtime seminars were conducted through the medium of English and took place at KTH or online. Some of the lunchtime seminars were specifically aimed at doctoral students. There has been an increase in the number of requests for career support from this target group. In 2024, KTH organised a get-together for doctoral students where doctoral alumni working in differ-

Figure 5. Full year students and full year performances 2015–2024

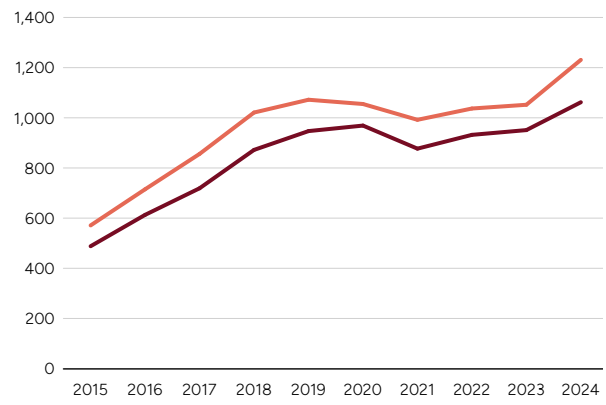


— Full year students (HST) are defined as the number of students who have started studies on a course multiplied by the number of course higher education credits divided by 60.

— Full year performance (HPR) is defined as the number of higher education credits gained on a course or sub-course divided by 60.

Source: Ladok.

Figure 6. Full year students and full year performances, fee-paying students 2015–2024



— Full year students (HST) are defined as the number of students who have started studies on a course multiplied by the number of course higher education credits divided by 60.

— Full year performance (HPR) is defined as the number of higher education credits gained on a course or sub-course divided by 60.

Source: Ladok.

ent parts of the business community shared their experiences. A total of almost 1,000 students and doctoral students participated in the various career activities in 2024.

Since 2022, KTH has been part of a national career guidance network. This network is a collaboration between Swedish universities with a view to exchanging experiences and developing coordination of career support activities. In 2024, KTH has invited students from the other universities to participate in KTH's digital career seminars.

Alumni relations

Alumni activities aim to establish and maintain good relations with alumni in order to increase the long-term commitment to KTH among former students, both nationally and internationally.

The KTH Alumni Day was held at KTH Campus during the autumn and was attended by about 200 alumni. An alumni network was established in Stockholm in connection with this. KTH already has twenty international alumni networks in Europe, the UK, South-east Asia, the US, China, Africa, Japan and India.

Figure 7. Full year students 2021–2024

	2024		2023		2022		2021	
	FYS	Proportion (%) of women/men	FYS	Proportion (%) of women/men	FYS	Proportion (%) of women/men	FYS	Proportion (%) of women/men
Master of Architecture, 270/300 HE credits	458	59/41	456	58/42	430	58/42	429	61/39
Master of Science in Engineering 270/300 HE credits	5,647	31/69	5,345	32/68	5,076	32/68	5,033	33/67
in addition, within Master programmes	*2,266*	*33/67*	*2,171*	*34/66*	*2,268*	*34/66*	*2,392*	*36/64*
Bachelor of Science in Engineering 180 HE credits	1,667	28/72	1,595	27/73	1,600	27/73	1,633	28/72
Subject Teacher Education in Technology, Secondary Education, 270 HE credits	3	20/80	4	43/57	6	25/75	9	39/61
Supplementary teacher education 60/90 HE credits	48	44/56	52	44/56	66	38/62	65	40/60
Master's Programmes 60/90 HE credits	16	76/24	19	62/38	28	58/42	38	57/43
Master's Programmes 120 HE credits	3,695	35/65	3,423	36/64	3,422	36/64	3,519	36/64
of which within Master of Science Engineering programmes	*2,266*	*33/67*	*2,171*	*34/66*	*2,268*	*34/66*	*2,392*	*36/64*
Bachelors Programmes 180 HE credits	299	40/60	281	40/60	263	35/65	262	36/64
Technical Preparatory Year, Technical Preparatory Semester 60/30 HE credits	740	31/69	665	30/70	774	31/69	951	33/67
University Diploma 120 HE credits	11	25/75	31	19/81	45	29/71	54	33/67
Exchange students arriving at KTH	565	37/63	560	38/62	530	38/62	306	37/63
Courses	820	53/47	472	46/54	307	40/60	234	38/62
Total	**13,969**	**41/59**	**12,903**	**37/63**	**12,547**	**35/65**	**12,533**	**35/65**

Figure 8. Full year students and performance rate, fee-paying students 2021–2024

	2024		2023		2022		2021	
	FYS	Performance rate (%)	FYS	Performance rate (%)	FYS	Performance rate (%)	FYS	Performance rate (%)
Master of Architecture, 270/300 HE credits	-	-	-	-	0	68	0	479
Master of Science in Engineering 300 HE credits	1	89	0	903	9	67	4	79
Bachelor of Science in Engineering 180 HE credits	3	118	1	160	12	62	5	67
University Diploma 120 HE credits	0	277	0	0	-	-	-	-
Bachelors Programmes 180 HE credits	11	84	11	84	16	77	16	75
Supplementary teacher education 60/90 HE credits	0	0	-	-	1	167	1	52
Master's Programmes 60 HE credits	11	92	16	95	23	91	16	94
Master's Programmes 120 HE credits	1,187	86	1,014	90	973	91	949	89
Courses	3	96	3	66	1	89	1	107
Study Abroad Programmes	9	71	6	62	2	56	0	0
Nordig	-	-	-	-	-	-	0	492
IISMA	6	70	-	-	-	-	-	-
Total	**1,231**	**86**	**1,052**	**90**	**1,037**	**90**	**992**	**88**

Sources figures 7 and 8: Ladok.

Figure 9. First degrees 2021–2024

	2024		2023		2022		2021	
	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men
Degree of Master of Architecture 270/300 HE credits	**111**	**58/42**	**70**	**60/40**	**72**	**60/40**	**99**	**57/43**
Degree of Master of Science in Engineering 270/300 HE credits	**1,206**	**34/66**	**1,134**	**39/61**	**1,134**	**36/64**	**1,310**	**37/63**
Biotechnology	51	55/45	53	68/32	46	70/30	54	70/30
Engineering and Education	28	54/46	33	67/33	34	47/53	27	56/44
Computer Science and Engineering	127	21/79	112	21/79	113	16/84	129	24/76
Design and Product Realisation	74	55/45	68	49/51	73	52/48	84	54/46
Electrical Engineering	67	13/87	60	13/87	58	21/79	62	13/87
Energy and Environment	56	61/39	67	60/40	56	57/43	69	58/42
Vehicle Engineering	98	18/82	103	24/76	94	19/81	116	16/84
Industrial Engineering and Management	118	23/77	111	39/61	120	39/61	151	36/64
Industrial Technology and Sustainability	13	31/69	2	0/100	-	-	-	-
Information and Communication Technology	37	19/81	26	38/62	32	22/78	47	28/72
Engineering Chemistry/Chemistry and Chemical Engineering	2	50/50	5	40/60	2	0/100	4	50/50
Mechanical Engineering	114	21/79	97	23/77	112	27/73	141	32/68
Materials Design and Engineering	15	40/60	23	43/57	20	50/50	25	48/52
Medical Engineering	35	69/31	33	48/52	41	56/44	31	58/42
Media Technology	44	57/43	47	57/43	35	37/63	43	63/37
Microelectronics	0	0/0	0	0/0	2	0/100	2	50/50
Civil Engineering and Urban Management	154	42/58	137	54/46	154	45/55	127	45/55
Engineering Physics	111	19/81	106	20/80	93	17/83	120	24/76
Engineering Chemistry	50	66/34	43	70/30	41	56/44	68	49/51
Not within programme/specialisation	2	50/50	-	-	-	-	-	-
Ej inom program/ej inriktning	10	10/90	8	25/75	8	75/25	10	20/80
Degree of Bachelor of Science in Engineering 180 HE credits	**369**	**31/69**	**309**	**24/76**	**292**	**35/65**	**388**	**32/68**
Degree of Master of Science	**77**	**49/51**	**66**	**52/48**	**52**	**48/52**	**74**	**61/39**
in Secondary Education	4	50/50	-	-	-	-	-	-
in Secondary Education, 225 HE credits, 2 teaching subjects	1	100/0	1	0/100	1	0/100	4	100/0
in Upper Secondary Education, 210 HE credits, 1 teaching subject	24	50/50	23	43/57	9	33/67	14	64/36
in Upper Secondary Education, 300 HE credits, 2 teaching subjects	33	45/55	37	57/43	37	54/46	46	54/46
in Secondary Education, 270 HE credits	1	0/100	0	0/0	1	0/100	6	67/33
in Secondary Education, 180 HE credits, 1 teaching subject	1	100/0	3	33/67	4	50/50	3	67/33
in Secondary Education, 240 HE credits, 2 teaching subject	1	0/100	0	0/0	0	0/0	1	100/0
in Secondary Education, 60 HE credits, 2 teaching subject	12	58/42	2	100/0	-	-	-	-
Degree of Master of Science 120 HE credits	**1,819**	**35/65**	**1,487**	**37/63**	**1,602**	**36/64**	**1,894**	**34/66**
of which also graduated as a Master of Science in Engineering[1)]	*519*	*33/67*	*494*	*37/63*	*519*	*38/62*	*704*	*36/64*
of which joint degree	*59*	*51/49*	*45*	*47/53*	*53*	*32/68*	*38*	*47/53*
Degree of Master of Science 60 HE credits	**44**	**55/45**	**38**	**58/42**	**70**	**60/40**	**73**	**52/48**
Master Degree 60/90 HE credits[2)]	**-**	**-**	**-**	**-**	**-**	**-**	**1**	**0/100**
Degree of Bachelor of Science 180 HE credits	**810**	**31/69**	**679**	**35/65**	**736**	**36/64**	**1,020**	**40/60**
University Diploma 120 HE credits	**23**	**35/65**	**18**	**39/61**	**20**	**25/75**	**27**	**22/78**

[1)] this year and earlier
[2)] according to older regulations

Source: Ladok.

Approximately 250 participants are included in the KTH mentoring programme in 2024–2025. This programme offers students the opportunity to be mentored by an alumnus with a view to providing support and inspiration as they embark upon their careers. A number of activities took place during the year to expand the alumni network. These included farewell events for international students and organisation of a gathering for around 100 alumni in Switzerland. Alumni have also been invited to events in Rwanda, Japan, the UK, the US, South Korea and France. Recruitment of international students has been supported by alumni in Mexico, Brazil, India, China, In-donesia, Thailand and Vietnam.

Around 3,400 new alumni joined KTH's alumni network during the year, which is made up of a total of around 30,000 alumni. KTH's alumni group on LinkedIn includes around 20,200 alumni.

Education at third-cycle level

One of KTH's research goals is to contribute to the transition required for a sustainable society through interdisciplinary approaches and collaboration with prominent universities, the business community and other societal stakeholders. This goal is also reflected in its third-cycle education, which provides the opportunity to complete a Degree of Doctor in a dynamic, international environment. KTH's third-cycle education programmes ultimately contribute to prominent research.

Recruitment

KTH recruits through a coordinated announcement of vacant doctoral positions nine times a year. The clear recruitment process aims to increase interest among prospective applicants, and to highlight KTH as both a workplace and a university. 277 (316) doctoral studentships were advertised in 2024. 21,846 people applied, including 6,387 women, 15,394 men and 65 who did not declare their gender. The number of applicants increased in 2024, while the number of posts advertised decreased compared to 2023. Recruitment to third-cycle programmes also takes place in a different order and also without prior advertising, as is the case for externally employed doctoral students, for example.

Admissions

In 2024, 275 (287) newly admitted doctoral students started third-cycle studies, of whom 36 (34) per cent were women and 64 (66) per cent were men. About 8 per cent of newly admitted doctoral students are admitted with the aim of obtaining a Degree of Licentiate. These comprise 39 (50) per cent women and 61 (50) per cent men. See Figure 12. The number of admissions varies over time. 2022 saw a significant drop in the number of doctoral students admitted, which prompted work on the processes for recruiting and admitting doctoral students. The number of admissions has largely recovered, but a slight downward trend can still be seen. This has led to a strategic discussion on the dimensioning and funding of third-cycle education being initiated during the year.

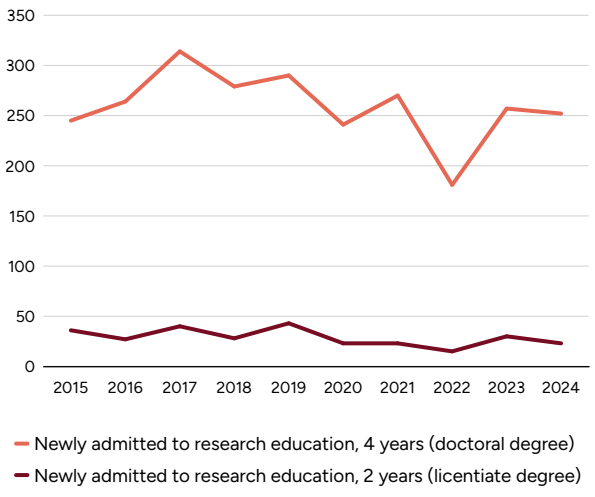
Externally employed doctoral students are doctoral students whose primary employment is outside the university and who conduct their doctoral programmes within the framework of their employment. The employer may be a private or public organisation. There were 28 (35) newly admitted externally employed doctoral students in 2024, of whom 25 (29) per cent were women and 75 (71) per cent men.

In 2024, 106 people (39 per cent) of students newly admitted to third-cycle education had a qualifying degree from KTH, of whom 61 per cent had a Degree of Master and 34 per cent a Degree of Master of Science in Engineering. A clear trend has emerged in recent years whereby the proportion of graduates with Degrees of Master is increasing, while the proportion of graduates with Degrees of Master of Science in Engineering is decreasing. Of new admissions in 2024, 49 per cent have degrees from countries other than Sweden, which is the same percentage as in the previous year.

Degree of activity and study funding

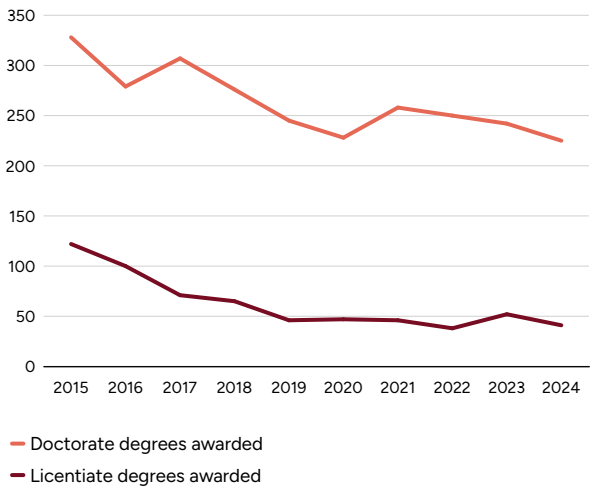
In 2024, 1,720 registered doctoral students had some activity in third-cycle education. Of these, 1,551 doctoral students had an activity rate of at least 50 per cent and 1,698 had an activity

Figure 10. Newly admitted research students 2015–2024



Source: Ladok.

Figure 11. Licentiate and doctorate degrees 2015–2024



Source: Ladok.

Figure 12. Newly admitted and registered research students 2021–2024

New students per research field

	2024		2023		2022		2021	
	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men
Biological Sciences	3	33/67	1	0/100	2	50/50	4	25/75
Computer and Information Science	50	38/62	46	24/76	45	24/76	74	32/68
Economics and Business	0	0/0	2	50/50	0	0/0	4	50/50
Electrical Engineering, Electronic Engineering, Information Engineering	32	34/66	48	23/77	22	27/73	42	17/83
Philosophy, Ethics and Religion	0	0/0	1	0/100	1	0/100	1	100/0
Physical Sciences	17	24/76	22	32/68	14	50/50	14	36/64
History and Archaeology	1	0/100	0	0/0	0	0/0	2	50/50
Health Sciences	7	14/86	6	50/50	2	100/0	9	67/33
Industrial Biotechnology	22	55/45	25	40/60	24	42/58	20	60/40
Chemical Sciences	13	31/69	10	80/20	11	64/36	5	40/60
Chemical Engineering	15	47/53	21	57/43	20	55/45	29	45/55
Arts	1	100/0	1	0/100	4	50/50	2	100/0
Mechanical Engineering	36	33/67	28	25/75	10	30/70	25	20/80
Mathematics	14	21/79	16	13/87	8	25/75	10	30/70
Materials Engineering	24	33/67	17	35/65	13	31/69	18	22/78
Medical Engineering	2	50/50	1	100/0	3	67/33	3	33/67
Environmental Engineering	7	29/71	5	60/40	5	60/40	1	100/0
Civil Engineering	31	45/55	34	41/59	12	50/50	26	31/69
Educational Sciences	0	0/0	3	67/33	0	0/0	4	75/25
Total new research students	**275**	**36/64**	**287**	**34/66**	**196**	**39/61**	**293**	**35/65**
Total number of students registered	**1,720**	**36/64**	**1,712**	**35/65**	**1,713**	**34/66**	**1,839**	**33/67**

Source: Ladok.

rate of at least 10 per cent. At the end of the year, 1,331 – or 76 per cent – of KTH's doctoral students had study funding in the form of full-time or part-time doctoral studentships. Among students with doctoral studentships, 37 (35) per cent were women and 63 (65) per cent were men.

Of doctoral students, 12 per cent funded their studies through gainful employment related to their study programmes, 2 per cent through other employment at higher education institutions, and 5 per cent through full-time or part-time scholarships. 5 per cent of doctoral students funded their studies, either full-time or part-time, by other means during the year. At KTH, therefore, doctoral students usually have doctoral studentships, but most of the international partner universities do not use the Swedish model involving doctoral studentships. As an international university, therefore, it is important for KTH also to have collaborations with scholarship organisations, global corporations and other relevant organisations. All doctoral students, regardless of the type of funding they have, should have equal financial circumstances, and scholarship funding should be financially equivalent to a doctoral studentship. In 2024, KTH decided to no longer accept doctoral students with scholarship funding under agreements with the China Scholarship Council. See the section entitled *Collaborations*.

Doctoral programmes

KTH's doctoral programmes were established in 2011, and there are now 32 of them. Doctoral students are admitted to both a subject at third-cycle level and a doctoral programme. The purpose of doctoral programmes is to ensure the quality of the study programme through an organised study structure. In 2024, two new doctoral programmes were established to strengthen the research environments concerned: sustainable environmental science and technology, and urban planning. Two doctoral programmes were discontinued during the year: planning and decision analysis and soil and water engineering. Several of KTH's schools have begun a review of their doctoral programmes and research subjects during the year.

A joint KTH coordination unit was set up during the year to deal with aspects such as administrative issues in respect of third-cycle education.

Student mobility

Extensive international collaborations and doctoral student mobility are crucial to KTH's third-cycle education. Strategic work with these is based primarily on deepening and further developing existing collaborations and developing new long-term partnerships. KTH attracts doctoral students from all over the world and is characterised by an international academic environment.

The UKÄ requested information on stays abroad for doctoral and licentiate graduates during the past year. The last survey conducted in 2023 showed that 51 (39) per cent of graduates had spent time abroad as part of their education.

Within the Nordic region, there is close cooperation within the Nordic Five Tech network, which also promotes student mobility in third-cycle education. There are many collaborations at a European level that are important for opportunities for doctoral students. Examples include joint supervision through cotutelle agreements and joint doctoral programmes. In 2024, the work of the Unite! university alliance continued with the development of graduate schools and other collaborations with a view to further increasing mobility among doctoral students.

Additionally, KTH maintains close exchanges with a number of prominent European universities within the EU, as well as in the UK and Switzerland. See the section entitled *Collaborations*.

Globally, student mobility in third-cycle education mainly involves a number of strategic partner universities.

Degrees

In 2024, 225 (242) doctorates were awarded, of which 33 (33) per cent went to women and 67 (67) per cent to men. Doctoral degrees awarded jointly with other universities totalled 5 (4). Of the 41 (52) students who completed Degrees of Licentiate during the year, 37 (38) per cent were women and 63 (62) per cent were men. See *Figure 13*. Completing a Degree of Licentiate as a stage in third-cycle education is becoming increasingly unusual and has largely been replaced by a mid-way seminar at KTH. Of graduate doctors in 2024, 15 (17) per cent have previously completed a Degree of Licentiate. KTH is of the opinion that Degree of Licentiate in Engineering, as a final examination, is highly relevant for employment in industry.

The actual period of study for doctoral students completing third-cycle qualifications in 2024 was 4.5 (4.4) years for Degrees of Doctor and 3.2 (3.1) years for Degrees of Licentiate. Men had a slightly shorter net study time than women for Degrees of Doctor, while women had a slightly shorter net study time for Degrees of Licentiate. Programme length is calculated according to the procedures provided by the Ladok student registry.

Figure 13. Doctorate and licentiate degrees 2021–2024

Doctorate degrees per research field

	2024		2023		2022		2021	
	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men
Biological Sciences	4	25/75	5	40/60	2	0/100	4	25/75
Computer and Information Science	39	15/85	38	18/82	34	29/71	26	35/65
Economics and Business	2	50/50	4	25/75	2	100/0	2	50/50
Electrical Engineering, Electronic Engineering, Information Engineering	28	25/75	35	20/80	27	15/85	44	23/77
Philosophy, Ethics and Religion	0	0/0	3	33/67	2	50/50	1	0/100
Physical Sciences	16	19/81	15	27/73	27	22/78	22	32/68
History and Archaeology	5	20/80	2	100/0	1	0/100	2	50/50
Health Sciences	2	100/0	1	100/0	4	25/75	8	50/50
Industrial Biotechnology	19	58/42	20	45/55	25	44/56	14	29/71
Chemical Sciences	6	0/100	7	29/71	7	14/86	13	38/62
Chemical Engineering	28	68/32	25	60/40	15	20/80	16	50/50
Arts	5	20/80	2	100/0	0	0/0	6	50/50
Mechanical Engineering	19	37/63	21	24/76	33	36/64	35	26/74
Mathematics	6	33/67	13	23/77	12	25/75	9	11/89
Materials Engineering	22	23/77	23	17/83	27	7/93	27	33/67
Medical Engineering	4	0/100	5	60/40	3	33/67	1	100/0
Environmental Engineering	6	67/33	3	0/100	2	0/100	1	0/100
Civil Engineering	14	36/64	17	59/41	26	42/58	27	41/59
Educational Sciences	0	0/0	3	67/33	1	100/0	0	0/0
Total	**225**	**33/67**	**242**	**33/67**	**250**	**28/72**	**258**	**33/67**

Licentiate degrees per research field

	2024		2023		2022		2021	
	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men	Total	Proportion (%) of women/men
Computer and Information Science	8	38/62	5	20/80	2	0/100	3	33/67
Economics and Business	1	0/100	2	100/0	0	0/0	0	0/0
Electrical Engineering, Electronic Engineering, Information Engineering	10	20/80	13	15/85	9	33/67	9	22/78
Philosophy, Ethics and Religion	0	0/0	0	0/0	0	0/0	2	50/50
Physical Sciences	1	100/0	1	100/0	0	0/0	1	0/100
Health Sciences	0	0/0	0	0/0	1	100/0	1	0/100
Industrial Biotechnology	1	0/100	2	0/100	1	0/100	2	50/50
Chemical Sciences	0	0/0	1	0/100	0	0/0	0	0/0
Chemical Engineering	0	0/0	3	100/0	0	0/0	3	100/0
Arts	6	33/67	4	25/75	8	25/75	2	0/100
Mechanical Engineering	1	100/0	2	0/100	0	0/0	0	0/0
Mathematics	2	0/100	3	33/67	5	20/80	6	17/83
Materials Engineering	0	0/0	1	100/0	1	100/0	1	0/100
Medical Engineering	11	55/45	14	50/50	10	20/80	15	40/60
Environmental Engineering	0	0/0	1	100/0	1	100/0	1	100/0
Civil Engineering	**41**	**37/63**	**52**	**38/62**	**38**	**29/71**	**46**	**35/65**
Educational Sciences								

Source: Ladok.

Programme development

Future Education at KTH change programme

Future Education is a programme of change that will run between 2022 and 2027.

In 2024, the President made a policy decision on KTH's future range of programmes. The decision stated that KTH's programmes should be:

- relevant to society and promote development towards the sustainable society of the future
- unique within KTH; that is, with a profile that is not covered by other KTH programmes
- sufficiently attractive to ensure a sustainable number of applicants per place, and with predictable student completion
- integrated with KTH research, with well-established inputs and dynamic outputs
- genuinely accessible to students from different backgrounds in terms of gender, academic background and nationality
- sustainable both financially and in terms of the working environment.

These criteria guide KTH's operational planning in education.

During the year, a working group has been working on developing KTH's learning environments in the short and long term.

30 development projects were initiated in 2024. These projects are in the following domains: AI, stubborn problems, courses and programmes offered, broader recruitment and participation, and development of examinations, study paths and teaching ability.

Since its launch in 2022, the programme management has produced 50 episodes of the Fikasnack podcast on the future of education. This is used as a channel for knowledge sharing and exchange of experiences on educational development at KTH and elsewhere. The episodes are available on Spotify and YouTube, with subtitled versions on KTH Play.

Digitalisation of courses and study programmes

The use of digital tools for courses and study programmes continued to increase in 2024. *Figure 16* shows the number of page views per year in the KTH learning platform Canvas over the past five years. In total, Canvas had 94 million page views in 2024, up almost 12 per cent compared to the previous year. The way in which page views are counted has been adjusted in 2024.

The development of a new programme syllabus planning solution continued during the year. The local system solution is being replaced by a common national system solution as part of Ladok.

KTH made the transition to issuing digital degree certificates in May 2024. The processing of tuition fees was also digitalised, which has reduced lead times and given students a better overview of their tuition fees.

A number of ongoing improvements in digital education support were implemented in 2024. This included the development of new support for timetabling, examination planning and management of credits awarded between different systems. Furthermore, a new studio was opened where teachers can record educational material or conduct high-quality digital meetings.

Of the educational activities for teachers offered by KTH, the seminar on Generative AI is one of the most popular.

Collaborations

KTH has a large number of educational collaborations on both a national and an international level. These are an important part of KTH's development in terms of both education and research.

These collaborations contribute to KTH's goal of ensuring that its courses and study programmes are of the highest quality and internationally competitive. In 2024, KTH has developed a guide to establishment of educational collaborations.

Stockholm Trio

The University Alliance Stockholm Trio consists of the Karolinska Institute, KTH and Stockholm University. As of November 2023, the agreement between the universities is valid for three years at a time. The presidency of the steering committee changes every academic year and was transferred from KTH to the Karolinska Institute in mid-2024. The university alliance has a steering committee comprising the Presidents and the University Directors of the three universities, as well as student representatives with the right to attend and speak.

In 2024, the steering committee made decisions on matters such as priority areas and specified goals for the 2025–2027 period. Each area has a defined purpose and tasks for working groups and operational support. These areas are education, the Stockholm Trio for Sustainable Actions, research infrastructure, coherent campuses, EU cooperation and internationalisation.

A number of activities were carried out under the Stockholm Trio in 2024, a selection of which are described below.

- Meeting with the Presidents of the Stockholm Trio and the Moderate Party's representatives in the parliamentary Committee on Education regarding input for the research bill and research funding.
- Meeting with the Regional Council Committee on the Stockholm region's potential as a centre for education, research and innovation.
- Meeting with the Moderate Party's group leader in Stockholm City Council on Stockholm's position regarding innovation, research, development and talent attraction.
- Hearing at the Ministry of Education on Sweden's position ahead of the EU's upcoming framework programme for research and innovation.
- Dialogue meeting with Region Stockholm on the new regional development plan for the Stockholm region.
- Leadership dialogue with the City of Stockholm on the city's top priority areas, such as a strategy to strengthen Stockholm as an academic capital.
- Participation in the Tech Arena conference, with a joint exhibition stand showcasing Stockholm Trio innovation activities.
- Joint alumni gatherings as part of the Stockholm Trio Alumni Mixer.
- A workshop within the Stockholm Trio – University of Tokyo strategic partnership to deepen interdisciplinary collaboration on common challenges in biomaterials, sustainable urban development, ageing, robotics and education for sustainable development.

Activities conducted by the Stockholm Trio for Sustainable Actions in 2024 included:

- A study trip focusing on sustainable textiles and fashion.
- A full-day seminar on the theme of sustainable fashion and how the academic community, industry and government can work together to promote a more sustainable textile and fashion system.
- Funding was announced to finance a seminar on climate, health or sustainable development within the framework of the 2030 Agenda and the Sustainable Development Goals.
- A call for interdisciplinary collaborations in education and research for 2025–2026, where three out of twelve applications were awarded funding.
- A summer course, *One Health – Transformation for Sustainability*, was held.
- An event was organised in collaboration with the representation in Brussels with the aim of influencing both the current framework programme and the upcoming FP10 framework programme.

The Brussels representation's activities during the year included the following:

- The Presidents' visit to Brussels in the context of Nordic University Days, which brought together presidents from universities in Denmark, Finland, Iceland, Norway and Sweden. Over two days, dialogues were held with representatives from the European Commission, the European Parliament, the European Research Council and NATO.
- The Stockholm Trio organised an EU course for researchers for the third year running. Two days were held in Stockholm where participants had the opportunity to listen to colleagues with experience of EU projects and EU evaluation. Two days were held in Brussels which focused on the design and negotiation of the framework programme, the respective roles and mandates of the various EU institutions and how lobbying works.
- Continuous information on the Horisont Europa (Horizon Europe) work programme for 2025–2027 was obtained during the year. Specific interaction with experts at each university has taken place in the fields of sustainability, health data, education, innovation, animal testing, Africa cooperation and international affairs.

Joint courses and study programmes

A two-year Master's programme in Molecular Techniques in the Life Sciences is being run together with Stockholm University and the Karolinska Institute. The programme had 35 (29) beginners in 2024.

The joint two-year Master's programme in biostatistics and data science, established in 2023, was further developed during the year. This programme was offered for the first time in 2024, with 39 beginners, including 16 students required to pay tuition fees and 4 studying for a Master of Science in Engineering.

Educational partnerships with Swedish universities

KTH and Mid Sweden University continued their collaborations in 2024. The two have collaborated on Master of Science in Engineering programmes since 2011. This cooperation means that students can continue to pursue certain two-year Master's programmes at KTH after completing the first three years of the Master of Science in Engineering programme for which Mid Sweden University is responsible. 25 (24) students from Mid Sweden University started a two-year Master's programme at KTH in the 2024 autumn semester. After completing the programme, students can obtain a Master of Science in Engineering and a Degree of Master from KTH and a De-gree of Bachelor from Mid Sweden University. The collaboration covers the computer science, electrical engineering and industrial design engineering programmes at Mid Sweden University.

This cooperation has been developed further, and a joint Master of Science in Engineering in technical chemistry was established in 2020. Four (three) students started the programme at Mid Sweden University in the autumn semester of 2024. These students will spend their first three years of study at Mid Sweden University for the most part, and the last two years at KTH. This study programme culminates in a joint Master of Science in Engineering from KTH and Mid Sweden University.

The two-year Master's programme in Sports Technology is an interdisciplinary cooperation with the Swedish School of Sport and Health Sciences (GIH), and had 11 (16) beginners during the year. The programme leads to a Degree of Master at KTH. Together with the Swedish School of Sport and Health Sciences (GIH), KTH is also one of Sweden's five national sports universities. National sports universities make it possible for elite athletes among the student body to combine an elite programme with their university studies, which some 80 KTH students are doing in the 2024/2025 academic year. Five of these students competed in the Paris Olympics, two of whom won medals.

KTH also cooperates with the Stockholm Trio partners on courses and study programmes. A two-year Master's programme in Mathematics is being conducted in cooperation with Stockholm University, which had 24 (20) beginners in 2024. A joint third-cycle programme in the field of medical technology is also being run with the Karolinska Institute. Four (four) doctoral degrees were awarded within the partnership during the year. See the section entitled *Stockholm Trio*.

Strategic partner universities and networks

KTH has five strategic partner universities: Nanyang Technological University in Singapore, Shanghai Jiao Tong University in China, the Indian Institute of Technology Madras in India, Hong Kong University of Science and Technology in Hong Kong and the University of Tokyo in Japan. In 2024, KTH visited Shanghai Jiao Tong University and Hong Kong University of Science and Technology.

The partnership with the University of Tokyo is being run together with the Karolinska Institute and Stockholm University within the framework of the Stockholm Trio: see the section entitled *Stockholm Trio*.

KTH provides seed funding for various projects in order to encourage research collaborations between KTH and the strategic partner universities. KTH has a joint graduate school with Shanghai Jiao Tong University. In addition to this, KTH has a programme for joint doctoral students with the strategic partner universities and other selected universities. Eight additional doctoral students received funding in 2024.

KTH continued to engage in international networks during the year, including T.I.M.E, CESAER, Nordic Five Tech and CLUSTER.

European Institute of Innovation and Technology

KTH is involved in five of the EIT's knowledge and innovation programmes: EIT Digital, EIT InnoEnergy, EIT Raw Materials, EIT Health and EIT Urban Mobility. See the section entitled *Research*. KTH is involved in eleven joint Master's programmes within the framework of the EIT. Interest in the two-year Master's programmes remains high, with a stable number of students applying and being accepted. In 2024, EIT students accounted for 18 per cent of the total number of students required to pay tuition fees. KTH has taken over the admission process for the EIT InnoEnergy's two-year Master's programme, Masters+, which is new for 2024.

Erasmus+

As in previous years, KTH received a large number of mobility scholarships within Europe for studies, placements and staff exchanges. During the year, KTH was also granted funding for exchanges with universities in Egypt, India, Indonesia, Sri Lanka and southern Africa via Erasmus+ International Credit Mobility.

In 2024, KTH was granted funding as a partner for three Erasmus+ capacity building projects. These projects target partner universities in the Caucasus and Kazakhstan, with emphasis on internationalisation, inclusion and optical communications.

As part of the Erasmus+ Partnership for Cooperation, Partnership for Innovation and Partnership for Excellence, KTH was granted three projects as a partner focusing on biomaterials, the health industry and efficient energy consumption for sustainable living.

KTH is already participating as a partner in two joint Erasmus Mundus Master's programmes as part of the programme. A total of 23 (25) Erasmus Mundus Joint Masters students were registered in 2024.

The Digital Europe Programme

The Digital Europe Programme is an EU programme with a view to expanding courses and programmes offered in the digital domain. In 2024, KTH was granted two projects as a partner with a view to developing KTH's cybersecurity programme and high-performance computing and cloud services.

Unite!

KTH is part of the Unite! university alliance, which is part of the EU's European Universities initiative. Its aim is to create a new European university model where students at all levels can shape their degree programmes by means of virtual or physical mobility at any of the participating universities. The aim of this cooperation is also to create innovative educational methods and coordinated governance models, and to jointly develop models for collaboration with the surrounding community and dissemination of research findings to the same.

The alliance, which has received EU funding for the 2022–2026 period, is made up of nine European universities. Together with Aalto University, KTH is coordinating the Innovative Learning and Flexible Learning Provision work packages.

KTH Global Development Hub and partnerships in Africa

The KTH Global Development Hub, GDH, supports the development of challenge-driven education and builds innovation competence by contributing solutions and innovations that are implemented in the community. KTH applies this methodology in collaboration with partner universities in Kenya, Tanzania, Botswana and Rwanda, and is also developing partnerships with universities in South Africa.

KTH welcomes 20 incoming students within the scope of the initiative in 2024. Several faculty mobility programmes have also been organised, in both directions. During the spring semester, KTH organised GDH partner days where representatives from African partner universities gathered at KTH to further develop and plan the partnership. The GDH has also worked in cooperation with Scania, Skogforsk and the Stockholm Environmental Institute, SEI to initiate and coordinate a pilot project, where students worked as part of student-driven projects on societal challenges for a more sustainable and equitable society.

China Scholarship Council

Twelve doctoral students with scholarships from the China Scholarship Council (CSC) were admitted to KTH during the year. Twelve visiting doctoral students and three visiting researchers were also awarded scholarships. Towards the end of 2024, KTH decided not to accept doctoral students and visiting doctoral students under the current agreement with CSC.

During the year, three outgoing first-cycle exchange students were awarded the CSC China-Link Scholarship. The 2023/2024 academic year was the first year in which KTH students had the opportunity to apply for this scholarship.

Research

KTH conducts research in the fields of natural sciences, technology, architecture, industrial economics, urban planning, history and philosophy. This includes both basic and applied research.

External research funding

KTH has a high proportion of external funding, from both the public sector and other stakeholders in Sweden and elsewhere. External research funding accounted for about 64 per cent in 2024, while research with direct government funding accounted for about 36 per cent of KTH's total income for research and third-cycle education.

National research funding

During the year, KTH was successful in obtaining funding from the Swedish Research Council and the Knut and Alice Wallenberg Foundation, which largely support basic research, but also received significant direct government funding for more applied research from the Swedish Energy Agency, Formas and Vinnova. KTH conducted a large number of activities in the form of seminars, workshops and individual guidance in 2024 in order to increase national external funding.

Figure 17 shows this year's research grant income from the main funding organisations. Research grant income is made up of grants that have been utilised during the year to fund expenses. Income from grants is thus different to grants awarded, which have a forward-looking and multi-year perspective.

Some of the major direct government funding received by KTH during the year is described below. The amounts indicated are grants awarded.

The **Swedish Research Council** awarded KTH a grant of SEK 315 (323) million in 2024. Most of this funding was awarded as part of the major call for project grants in natural and technological sciences.

KTH was one of a total of four universities awarded direct government funding in the call for a research council professor in natural and engineering sciences. This direct government funding is worth SEK 30 million and will runs for eight years, between 2024 and 2032. This project aims to develop next-generation spatial methods for studying material from clinical biobanks with a view to studying the binding of immune cells to antigens and characterising their location in relation to tumours.

KTH received two of a total of four grants in the call for research environment grants for research into sixth-generation wireless systems, 6G. The first research environment received SEK 28 million to investigate a wireless digital data transmission technology with intelligent edge computing for energy and cost-efficient 6G networks. The second research environment received SEK 24 million and focuses on sustainable and energy-efficient integrated 6G antennas. Both grants cover a four-year period, 2024–2028.

In 2024, **Vinnova** awarded KTH funding totalling SEK 241 (275) million. Two centres of excellence were awarded extensions in the call for centres of excellence. TECoSA phase 2 was awarded SEK 36 million and will be extended by five years, 2024–2029.
TECoSA is coordinated by KTH and promotes the scientific foundations, methods and technologies for the reliable edge computing systems and applications of the future. Phase 2 of the FibRe centre, coordinated by Chalmers University of Technology, was awarded SEK 36 million, of which SEK 17 million was allocated to KTH. FibRe is extended for five years, 2024–2029, and focuses on strategic research in fibre and polymer science, molecular modification and a dvanced characterisation.

KTH was also granted participations in other programmes, such as the national aeronautics research programme, strategic automotive research and innovation and Impact Innovation: Metals and Minerals, advanced digitalisation, emerging technologies and 6G: next-generation wireless systems.

In 2024, the **Knut and Alice Wallenberg Foundation, KAW**, decided on additional funding for the national programme for data-driven life sciences, DDLS, which will receive SEK 600 million for the period 2024–2026. This funding will be spent on initiatives such as Alpha Cell, a pilot project that aims to use artificial intelligence and molecular data in time and space to create a model of the functions of human cells and tissues. This project was hosted by SciLifeLab and KTH. See the section entitled *SciLifeLab*.

KTH was awarded three basic research projects in the foundation's call for research projects with major scientific potential. A project that aims to combine advanced experimental and theoretical methods to map the structure of lignin at various levels was awarded SEK 24 million. Another project was awarded SEK 30 million to investigate whether a new type of spectroscopy method can reveal how electrons bind together. A third project was awarded SEK 26 million and aims to investigate the properties and mechanisms of a new superconducting state of matter at micro level. All three projects will run for a five-year period, 2025–2029.

In the foundation's call for Scholars, universities can apply for support for profiling by nominating individual researchers whose research and development potential is of the highest international calibre and is expected to contribute to raising the current profile of the research field at their university. At KTH, eleven researchers have received Scholar funding and will each receive SEK 18 million over a five-year period, 2025–2029. One researcher will continue to receive funding of SEK 11 million over a five-year period, 2025–2029, as a Wallenberg Academy Fellow.

The **Swedish Energy Agency** granted KTH funding of SEK 235 (89) million.KTH is coordinating a project granted funding as part of the call for the future of fossil-free electricity production for a sustainable electricity supply. The Nuclear Materials Platform project received SEK 39 million, of which SEK 17 million will go to KTH over a four-year period, 2024–2027.

Other projects granted funding by the Swedish Energy Agency fall within the Sustainable Battery Value Chain programme through the Metal-free Redox Flow Batteries project. The project was granted SEK 10 million for the period 2024–2028. In the call for industrial transition, the project Intensification of Bio-CCS Through Additive Manufacturing to Enable Energy-efficient Negative Emissions was granted almost SEK 10 million for the period 2024–2026. Collaborative

Platform for the Realisation of Fusion Energy Reactors, a project under the Electricity Systems of the Future programme, was granted almost SEK 11 million for 2024–2027.

Formas, the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, has awarded KTH funding of SEK 168 (97) million in 2024. Four new food centres were awarded funding in the call for centres for increased food system preparedness and competitiveness. KTH is coordinating one of these, PLENTY, and participating in two others. PLENTY is a centre for symbiotic and circular food supply and is working towards transformation of the food system towards a robust circular supply model without waste. PLENTY is a centre with many partners and its total budget is SEK 85 million (SEK 40 million to KTH), distributed over four years. Blue Food – Centre for Future Seafood phase 2 was granted funding of SEK 40 million for another four years, 2025–2028. KTH now participates in a total of four of the eight Formas food centres.

The Swedish Foundation for Strategic Research, SSF, awarded KTH funding totalling SEK 83 (10.5) million in 2024. SSF granted SEK 60 million to the multidisciplinary research centre SMART 6GSAT – Sustainable Mobile Autonomous and Resilient 6G SatCom. This project aims to bring reliable and sustainable mobile connectivity to everyone in the world, even in remote locations where current connectivity is poor or non-existent. The project seeks to integrate traditional terrestrial mobile communications and space-based satellite communications into 6G, which is expected to be in use in the 2030s. The project is being coordinated by KTH and includes 21 partners from universities, research institutes, companies, regions and public authorities.

KTH received four of a total of ten projects granted funding where SSF, together with the National Research Foundation of the Republic of Korea, is focusing on projects involving collaboration between Swedish and South Korean research groups. Each project is allocated SEK 4.9 million.

International research funding

International research funding accounts for about 11 per cent of research revenue. The EU is the largest source of funding. KTH also receives research funding from other foreign funding bodies, mainly in Europe and the US.

The Novo Nordisk Foundation Research Leader Program is a programme for talented research leaders at various stages of their careers. In 2024, KTH was granted almost SEK 10 million for a project in the field of biocatalytic methods.

EU funding, including Horizon Europe

A number of strategic activities took place during the year to strengthen KTH's opportunities for successful participation in international research programmes. In particular, the initiative continued with targeted efforts to increase the number of Marie Skłodowska-Curie Actions (MSCA) postdoc scholarships. Additionally, the already established cooperation with the City of Stockholm was extended by means of a workshop that focused on developing project ideas for applications to Horizon Europe.

Another example of an initiative involved the Stockholm Trio university alliance organising – for the third time – an EU course. This course is aimed at researchers with no previous experience of EU projects and involves two days of theory and information on Horizon Europe, followed by practical exercises. The course concludes with a study visit to Brussels to provide participants with more of an understanding of the EU project environment and application process.
In 2023, KTH worked together with the Stockholm Trio to produce a position paper for the upcoming FP10 framework programme. In 2024, this position paper has been expanded and developed by gathering additional evidence. The information produced has supported the Stockholm Trio in the ongoing discussions on FP10. The Stockholm Trio has also submitted contributions for the European Commission's consultation on dual-use research.

KTH participated in 368 (325) applications in 2024 as part of the Horizon Europe framework programme. Horizon Europe has three main focal points, known as pillars:

- pillar one – Excellent Science
- pillar two – Global Challenges And European Industrial Competitiveness
- pillar three – Innovative Europe

In 2024, KTH was awarded funding for 47 (61) participations worth a total of about EUR 34 (30) million.

Of the projects awarded funding, 26 (22) come under pillar one.

Of these, 20 fall under MSCA, the EU's researcher mobility programme. Of the projects awarded funding, five are in the field of incoming postdocs, Postdoctoral Fellowships, nine are Doctoral Networks projects, one is a Staff Exchange project and one is an MSCA & Citizens project.

Four rounds of direct government funding were awarded under the ERC's calls for pioneering research: two Starting Grants, one Consolidator Grant and one Advanced Grant.

The ERC Starting Grant is awarded to promising researchers in the early stages of their careers to help them set up their own research groups and develop innovative projects in various scientific fields. As part of this call, KTH was granted around EUR 3 million for two projects that will continue for five years. One of the grants relates to a project in the field of organic chemistry, which is focusing on developing sustainable methods for breaking strong chemical bonds. Another grant relates to a project in the field of fibre and polymer technology, aimed at creating adaptive separation techniques for more efficient production of bio-based medicines.

The ERC Consolidator Grant is intended for more senior researchers with the potential to become world leaders in their field. Direct government funding of EUR 2 million was awarded for a five-year project at KTH entitled Interaction of Elastoinertial Turbulence and Material Microstructure.

The ERC Advanced Grant is aimed at well-established, world-class researchers with significant research activities over the past decade. A five-year project at KTH which aims to revolutionise hospital technology for PET and SPECT, known as molecular imaging, was awarded direct government funding, equivalent to around EUR 3.3 million, in 2024. The methods are used to detect cancer and cardiovascular diseases, for example, at an early stage.

17 (36) projects were approved under pillar two: five in cluster five (climate, energy and mobility), and four in cluster four (digital, industry and space). KTH is coordinating two of the projects awarded funding. KTH was awarded funding for two participations in the strategically focused initiatives, termed Missions, relating to selected societal challenges,

and six participations in the institutionalised European partnerships, one of which it coordinated. In 2023, the Chips Joint Undertaking institutional partnership was launched with a view to strengthening Europe's competitiveness in semiconductor technologies. This partnership falls under both Horizon Europe and the Digital Europe Programme. The first calls were decided in 2024, and KTH was granted EUR 4.2 million to start a pilot line for the production of silicon carbide semiconductors. There is national joint funding from Vinnova as well.

In 2024, KTH was awarded funding for four projects from a European Innovation Council funding instrument. The aim of this is to fund the development of breakthrough technologies. KTH is coordinating three of the four projects, which span research domains from fusion energy to advanced biotechnology.

Besides Horizon Europe, KTH was also granted funding for participations in other EU instruments. Six projects under Euratom, four under the Digital Europe Programme, two under the European Defence Fund and one each under the European Research Fund for Coal and Steel and the EU's Programme for the Environment and Climate Action (LIFE).

Strategic research domains

KTH is active in ten strategic research domains, and is the accountable authority for five. In 2024, funding for the strategic research domains where KTH is the accountable authority amounted to approximately SEK 341 (331) million. In total, KTH as an accountable authority has received almost SEK 3.6 billion in funding for strategic research domains between 2010 and 2024.

The five strategic research domains for which KTH is the accountable authority are in the fields of IT and mobile communications, e-science, transport, production and molecular bioscience.

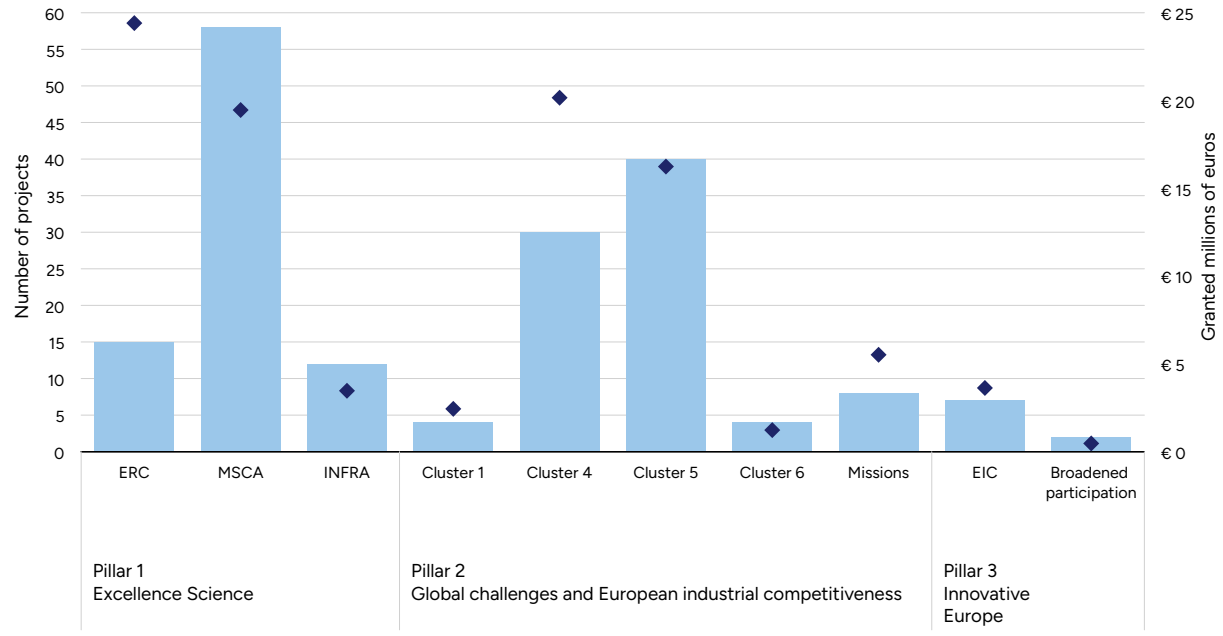
The funding of the strategic research domains contributes to world-leading and interdisciplinary cooperations between different disciplines and has made it possible to create a number of environments. The activities conducted in the strategic research domains are described in brief below; with the exception of molecular biosciences, which funds SciLifeLab activities. See the section entitled *SciLifeLab* and the separate annual report that KTH submits to the government for a description of SciLifeLab and the molecular biosciences strategic research domain.

IT and mobile communications

The interdisciplinary research environment Digital Futures has been working within the strategic research domain of IT and mobile communications since 2020 to address major societal challenges through new science for digital transformation. More than 170 research projects have been funded to date, involving over 250 research groups.

Research within the Digital Futures partnership focuses on the key societal challenges of smart urban development,

Figure 14. KTH's participation within Horizon Europe 2021–2024



ERC	European Research Council
MSCA	Marie Skłodowska Curie Actions
INFRA	Research Infrastructures
Cluster 1	Health
Cluster 4	Digital, Industry and Space
Cluster 5	Climate, Energy and Mobility
Cluster 6	Food, Bioeconomy, Natural Resources, Agriculture and Environment
Mission	Horizon Europe's Five Missions
EIC	European Innovation Council
Breddat deltagande	Broadened participation Broadened participation and dissemination of cutting edge expertise

Source: EU Funding & Tenders Portal, date 2025-01-21.

digitalised industry, health and wellbeing, and transformative education. Research themes include cybersecurity and reliability, connected and cyber-physical systems, and AI and machine learning. Digital Futures is helping to create favourable conditions for innovation and excellence in interdisciplinary research in these fields.

Besides KTH Royal Institute of Technology, Stockholm University and RISE, the eleven Digital Futures partners include the City of Stockholm, Region Stockholm, AstraZeneca, Ericsson, Saab, Scania, Skanska and Xylem. Workshops and other activities are being used to identify common research questions and collaborative projects in areas such as computerised preventive maintenance, analysis of insurance data for risk management purposes and early warning systems in neonatal care.

Digital Futures has a large programme in the field of internationalisation and recruitment. Since 2022, more than 40 leading professors from different parts of the world have conducted guest research at KTH with the support of Digital Futures. A visiting researcher programme for junior teachers, junior faculty was also established in 2024. Under the Digital Futures international postdoc programme, 50 postdoc projects, with more than 120 participating postdocs, have received funding in the period 2020–2024. At the Digital Futures summer research school in 2024, 60 first and second-cycle students had the opportunity to conduct a research project under the supervision of Digital Futures researchers. Exchanges with the University of California, Berkeley, with six students in either direction and Purdue University (two students) were new for this year.

Research findings from Digital Futures are communicated and debated in various forums. Since its inception, Digital Futures has organised 255 of its own workshops and seminars, supported 60 conferences in collaboration with other organisations, and organised 40 Distinguished Lectures and four summer schools for doctoral students. The Digitalize in Stockholm Future DigiLeaders conference was organised for the sixth time, bringing together a number of young international researchers to discuss academic career development. Furthermore, Stockholm Talents was organised with emphasis on the development potential of postdocs, doctoral students and Masters of Science in Engineering.

E-science

The Swedish e-Science Research Centre, SeRC, a strategic research domain in e-science, conducts internationally leading research at the interface of high-performance computing, data and AI with emphasis on methodology development and software. SeRC is run in collaboration with Stockholm University, Linköping University and the Karolinska Institute.

One key theme involves creating impact through synergies between strong applications, methodology development and infrastructure, where research is conducted in multidisciplinary programmes. For instance, SeRC research groups have created the world's most widely used computer program for molecular simulations, reconstruction of cryo-electron microscopy data and a new code for quantum chemistry. A new programme code for flow calculations was one of four finalists for the Gordon Bell Award.

As part of the European High Performance Computing Joint Undertaking, KTH has been assigned responsibility for coordinating European collaborations in the field of life sciences with a network of research centres in Japan, and with India. SeRC has also initiated new collaborations with Brazil.

Transport research

The strategic transport research domain, TRENoP, is run in cooperation with Linköping University and the Swedish National Road and Transport Research Institute. Since its inception, TRENoP has focused on faculty renewal and interdisciplinary research projects. More than 60 doctoral students have been

Figure 15. Professors 2024

During the year, KTH appointed professors in the following areas

Promoted to professor

- Numerical Analysis
- Computer Science
- Preclinical Proteomics with a Focus on Monogenic Diseases
- Electrical Engineering with Specialization in Hybrid Semiconductor Process Technology
- Nuclear Power Safety
- Biomedical Engineering with Emphasis on Magnetic Resonance Imaging
- Electrical Engineering with Specialization in Protection of Power Systems
- Computational Biophysics
- Ergonomics with a Focus on the Psychosocial Work
- Processing of Polymetric Materials
- Applied Physics
- Engineering Acoustics
- Fluid Mechanics
- Modeling of Metallurgical Processes
- Materials Physics: Silicon Nanostructures
- Mathematics, in Particular Analysis
- Analytical Chemistry
- Vehicle Dynamics
- Microsystems with a Specialisation in Medical Technology
- Computer Science with Specializiation in Intelligent software systems
- Geoinformatics
- Urban Design with Urban Theory

Newly appointed visiting professors

- Engineering Hydrology
- Wireless Communications
- Software Technology
- Sustainable Matallurgical Processes
- Sustainable Buildings with Specialization in Integrated Building Performance Management

Newly appointed adjunct professors

- Engineering Technology with Focus on Complex Systems
- Mechanical Properties of Steel

Source: HR-system.

examined through this, most of whom have moved on to public authorities or industry in Sweden. TRENoP is a multidisciplinary research collaboration involving a number of external partners focusing on a sustainable, safe and resilient transport system. TRENoP research domains include transport, policy and user analysis, vehicle systems and their interaction, transport infrastructure and transport and logistics systems.

Several transport research centres have received extended funding through TRENoP. These are ECO2 Vehicle Design, Integrated Transport Research Lab, the Centre for Traffic Research and Road2Science 3.0, which will also be acting as the coordinating node for the Swedish Competence Centre in Road Technology. See the section entitled *Research centres*. TRENoP is also active in two of ten areas of excellence in the railway industry on which the Swedish Transport Administration will be focusing until 2030.

Production research

Excellence in Production Research (XPRES), the strategic production research domain, is run together with Mälardalen University, RISE and the Swerim metals research institute. The aim is to add value to Swedish industry and society with emphasis on sustainability that spans the fields of circular manufacturing and resourceefficient use. XPRES members maintain productive and long-term partnerships with many Swedish manufacturing companies. In 2024, research continued to focus on human-centred production research, human-robot collaboration, AI and digital technologies in production, circular manufacturing, additive and hybrid manufacturing.

SciLifeLab

SciLifeLab is one of the government's major investments in national research infrastructure. SciLifeLab offers advanced technologies and expertise in molecular life sciences, enabling cutting-edge research to address complex biological and medical questions. The infrastructure provides services to researchers in the academic community, healthcare and industry. The aim is to enable pioneering interdisciplinary research that would otherwise not be possible in Sweden, and to promote research that leads to societal benefits.

The organisation is run by the four founding universities KTH, the Karolinska Institute, Stockholm University and Uppsala University, with KTH as the accountable authority, and via SciLifeLab's offices in Linköping, Lund, Gothenburg and Umeå. Cooperation within SciLifeLab is governed by procedural regulations and agreements between the founding universities.

SciLifeLab's infrastructure and operations have been reviewed by independent international expert groups in 2024. These evaluations form the basis for SciLifeLab's further development and have contributed to the updated strategy that was decided upon during the year.

Direct government funding for infrastructure, including targeted funding for pharmaceutical development and pandemic preparedness, totalled about SEK 378 (357) million in 2024. Its operations are also funded through strategic research domains, including molecular biosciences, for SciLifeLab's four founding universities. This helps to strengthen the research environments at the respective universities linked to SciLifeLab. This funding amounted to some SEK 174 (169) million in 2024.

Donations made by the Knut and Alice Wallenberg Foundation have enabled a number of major investments in the SciLifeLab infrastructure. The foundation has donated SEK 3.1 billion to the twelve-year data-driven life sciences (DDLS) programme, which began in 2021. In 2024, KAW donated a further SEK 600 million to data-driven life sciences at SciLifeLab in order to expand the DDLS programme and launch Alpha Cell, a new initiative aimed at understanding molecular cell mechanisms in space and time.

The SciLifeLab fellows programme is helping to improve the quality of research in the life sciences. This is funded through strategic research domains at the founding universities where admitted SciLifeLab fellows are employed. 27 fellows were active in the programme during the year, of whom seven were appointed during the year and five completed the programme. This programme now has 26 alumni in total. Recruitment of a further eight SciLifeLab fellows was ongoing in 2024, with an estimated start in 2025.

SciLifeLab, with KTH as the accountable authority, has been granted funding of EUR 6.88 million from the Marie Skłodowska-Curie Actions COFUND for the postdoc programme SciLifeLab PULSE, Program for Future Leaders in Life Science. The aim of PULSE is to train 48 future research leaders in molecular life sciences and innovation at an international level.

The role as a national research infrastructure provides SciLifeLab with the opportunity to coordinate joint initiatives for Sweden. In 2024, this has resulted in a number of collaborative initiatives and awarded funding to projects with both national and international funding.

More information about activities at SciLifeLab is available in the separate annual report submitted by KTH to the government.

Strategic initiatives and special initiatives

Research centres

KTH had 45 research centres at the end of the year. Research centres contribute to the development of competitive research environments together with external partners and offer networks for researchers and other stakeholders. Stakeholders included generate collaborative research where different partners agree on a common operational plan and contribute resources for its implementation.

During the year, KTH was awarded funding by Formas as the accountable authority for the PLENTY competence centre, a centre for symbiotic and circular food supply. KTH also participates in FORCE, a centre for food resilience and competitiveness, and PLATE, a Swedish research centre for resilient meals.

A research centre for Swedish maritime robotics was also established, with research funding from the centre's industrial partners. The aim is to develop marine systems with emphasis on marine robotics together with the Swedish Defence Materiel Administration, Saab Kockums AB and Saab Dynamics AB.

Additionally, a centre was established where KTH, together with Chalmers University of Technology, Volvo AB and Scania CV, will be manufacturing powertrains and delivering solutions that strengthen industries and promote sustainable mobility on a global level. The centre's activities are funded by the stakeholders involved.

A total of 13 centres received an extension of external funding in 2024.

KTH's involvement in Knut and Alice Wallenberg's strategic initiatives

KTH continues to be involved as a partner in the following strategic initiatives for the Knut and Alice Wallenberg Foundation: Wallenberg AI, Autonomous Systems and Software Program, WASP, Wallenberg Centre for Quantum Technology, WACQT, and Wallenberg Initiative Materials Science for Sustainability, WISE. KTH is hosting the programme as part of the strategic initiative Wallenberg Wood Science Center, WWSC.

Research infrastructures

KTH is reliant on access to research infrastructure in order to conduct cuttingedge research and provide outstanding education. KTH continued to drive development work in 2024 with a view to providing long-term conditions for strategically important research infrastructures.

In the Swedish Research Council's needs inventory for national research infrastructures, the Council for Research Infrastructures prioritised five research infrastructures for which KTH can apply for funding.

KTH has what are known as established research infrastructures that are of particular strategic importance to KTH. For these, KTH has long-term plans for organisation, quality development and funding.

KTH has continued to participate in the Vinnova-funded collaboration project Swedish Collaboration for Access to Lab Infrastructure. In 2024, a guidance document has been developed to support universities in dealing with issues related to the levying of fees for research infrastructures, and with issues related to criteria for the accessibility of research infrastructures.

European Institute of Innovation and Technology

KTH is continuing its participation in five of the EIT's knowledge and innovation programmes in the fields of information and communication technology, energy, materials, health and mobility.

The level of involvement has varied over the years, mainly on the basis of the circumstances and development plan for each programme. From having been a main partner in all programmes, KTH is now an associate partner for EIT Health since 2024 and will also become an associate partner for EIT Raw Materials in 2025.

In 2024, KTH continued with the establishment of a joint fusion power initiative together with EIT InnoEnergy and the start-up company Novatron Fusion Group AB. Within EIT Raw Materials, KTH participated in three scale-up projects dealing with recycling of magnets and batteries, valorisation of industrial waste and resource efficiency in metallurgical processes.

Developments in the field of sustainable production

KTH's direct government funding for research and third-cycle education includes SEK 10 million for running operations in Södertälje. The research activities in Södertälje have three specialisations: production management, industrial reliability and production logistics. Operations in Södertälje are conducted in close collaboration with partners Scania, AstraZeneca and the municipality of Södertälje. The initiative includes three corporate doctoral students from Scania and two from AstraZeneca. KTH has decided to relocate its research activities in Södertälje to KTH Campus while further developing its collaboration with KTH's strategic partners. KTH is preparing for an integrated environment for research in the field of production. For instance, KTH's research infrastructure in the field of production has been reinforced thanks to new investments and a donation of experimental equipment.

Cybercampus Sweden

Cybercampus Sweden is a national initiative, a collaboration between universities, research institutes, public authorities and companies in Sweden. Cybercampus aims to conduct research, innovation and education related to cybersecurity. Its activities aim to address needs that are not addressed by any other stakeholders operating in the field of cybersecurity, supporting all sectors of society.

The results will help to enhance cybersecurity, while also strengthening society's defence capability and Sweden's competitiveness.

In 2024, its activities have been built up by recruiting staff and holding discussions with future Cybercampus Sweden partners. To date, 24 organisations from the academic community and the public and private sectors from all over Sweden have expressed an intention to enter into a formal partnership with Cybercampus.

Activities conducted in 2024 include the development of a strategy for continuing professional education, seminars for decision-makers, conferences, basic cybersecurity training programmes and competitions for young people in the National Swedish Hacking Team together with public authorities, companies and the voluntary sector.

During the year, Cybercampus Sweden took part in an application relating to the EU's Cybersecurity Skills Academy call. This project will begin in January 2025 and aims to develop and share cybersecurity training programmes for professionals working for small and mediumsized enterprises and the public sector. Cybercampus Sweden is participating in the project as one of 16 partners in ten EU countries.

Establishment of a national interdisciplinary research agenda in the field of cybersecurity has been initiated, and work has begun on recruiting doctoral students.

Publishing and bibliometrics

Bibliometric indicators can be used to analyse the research footprint and citation impact of universities, as well as ongoing quality enhancement activities and monitoring. For a long time, KTH has conducted annual bibliometric monitoring that provides an overview of KTH's publications, citation impact and co-authorship with other universities. All data presented in this section is taken from the annual monitoring, which is based on the publications registered in KTH's DiVA repository. Definitive data for 2024 in respect of volume and open access articles can only be presented next year due to delays in recording such data in the publication databases. Measurement of citation indicators is only meaningful after a few years following publication of the research findings.

KTH's publication volume of peer-reviewed articles has remained relatively constant in recent years at between 4,200 and 4,400 articles. The number of articles in journals has remained relatively stable in recent years, at just over 3,100. The number of papers has been declining for a number of years, particularly

in 2020 and 2021 (the years of the pandemic), although some recovery was seen in 2022 and 2023.

KTH's field-normalised citation rate (cf) stands at 1.15 for 2022, where a value of 1 represents the average value in the various subject areas on a global level. KTH's value shows a citation rate 15 per cent above the world average. The value is 1.16 over the entire evaluation period 2014–2022. The citation impact at the institutional level shows greater variation, both between years and between institutions, from values below one to over three. The proportion of articles in the top 10 per cent in their respective subject areas is 12 per cent in the last year. The top 10 per cent indicator is relatively stable over time for KTH as a whole, but this year's result is slightly higher than in previous years.

KTH's value for the field-normalised journal citation indicator (jcf) for 2022 is 1.24, which corresponds to 24 per cent above the global average. This indicator is relatively sluggish at university level, and KTH has been in the 1.21–1.30 range over the last five years. This indicator is traditionally interpreted as visibility among the publication channels.

Open access publications

In 2023, KTH made 76 per cent of its peer-reviewed research findings openly accessible, which is an increase from the previous year. Figure 22 shows the change in open access at KTH between 2013 and 2022.

KTH is thus well on the way to achieving the goals of the bill Forskning, frihet, framtid – kunskap och innovation för Sverige (Research, Freedom, Future – Knowledge and Innovation for Sweden) (Government Bill 2020/21:60), which indicates that all published material should be openly accessible immediately upon publication. Almost 100 per cent of KTH's doctoral and licentiate theses are openly accessible.

Digitisation of research data

KTH offers services and support for research data management. This is done to facilitate research, where data needs to be documented and shared between collaborating parties, and also to ensure that the research data is searchable, usable and of good quality. Developments in AI are increasing the need for high-quality, accessible research data.

A decision was made during the year to introduce a new digital service to provide better conditions for good research data management for KTH's research in accordance with the Data Governance Regulation.

Ranking

Rankings are used to compare universities on the basis of aspects such as research, education and collaboration, and can be viewed as an assessment of the international competitiveness of a university. Visibility and rankings affect student recruitment, recruitment of international researchers and international cooperations, for instance.

KTH performs well in various international university rankings. Several external stakeholders produce these rankings based on different methodologies, with criteria such as student experience, internationalisation, research output or academic reputation. The aim is to provide an indication of the overall quality of universities. Some rankings also assess specific subject areas. None of these rankings is capable of providing a complete picture of a university, and results may vary significantly depending on the choice of parameters. The QS World University Rankings, QS, and the Times Higher Education ranking, THE, are considered to be some of the most prestigious and important on an international level.

KTH was ranked 74th (73rd) out of 1,500 universities in the world in the QS ranking for 2025, which was released in June 2024. This places KTH in tenth place among EU universities and highest among Swedish universities. KTH is ranked 66th (58th) in the QS Sustainability Rankings for 2025. The number of participating universities has increased from 1,397 to 1,751 between 2023 and 2024. KTH's lower ranking is partly due to increased competition.

In the THE World University Ranking for 2025, KTH rose to 95th place (97th) among more than 2,000 universities globally. KTH was also ranked 72nd (46th) out of 1,963 universities in the THE Impact Ranking for 2024, which gauges how universities are performing against the UN's Sustainable Development Goals. One reason for the lower ranking compared to last year is the increase in competition, with almost 400 more universities participating.

KTH has had several good results in specific subject rankings. In the QS subject ranking, KTH had 7 subjects in the top 50. Subject rankings where KTH performs well include mechanical engineering, electrical engineering, civil engineering, natural sciences, materials science, mathematics, physics and astronomy, architecture and engineering.

Collaboration

KTH's strategic collaborations aim to enhance the quality and relevance of education and research, while also creating value for external stakeholders and society in general. In 2024, KTH has continued to develop strategic partnerships and initiatives for cooperation with small and medium-sized enterprises. These efforts strengthen the link between KTH and the surrounding community and contribute to development and innovation on a broad front.

Strategic partnerships

KTH has 15 established long-term strategic partnerships with major global corporations, the public sector and leading research institutes that are of particular significance to KTH's activities. In 2024, a new strategic partnership came into being with Alleima, which is active in advanced materials engineering.

Strategic partnerships help to enhance the quality of KTH courses, study programmes and research, increase opportunities to obtain research funding, increase opportunities for the university's students to work on relevant projects and increase co-utilisation of research infrastructure. Strategic partnerships provide a structured way of developing collaboration with the surrounding community both nationally and internationally. KTH organises visits, events and fairs in addition to regular meetings with representatives from each organisation. Examples of initiatives in 2024 are as follows:

- Workshop on EU funding.
- Partner events with thematic workshops on the battery value chain, sustainable materials, fusion and sustainability.
- International study visit from and collaboration between KTH and The Wharton School, University of Pennsylvania.
- A fair together with THS and its chapters with a view to facilitating dialogue and contact between the chapters and the strategic partner companies.
- Degree project fair, guest lectures, project courses and study visits aimed at students.
- Three meetings of the Future Education External Advisory Forum, FEEAF, in which representatives from KTH's strategic partnership, the Association of Swedish Engineering Industries, the Federation of Consulting Engineers and Architects, Architects Sweden and the Swedish Association of Graduate Engineers participated.

The work with the strategic partnerships is followed up regularly by KTH's management together with the management of each partner.

Personal mobility

Personal mobility to KTH from companies and the public sector is an important element in KTH's strategic collaboration. To attract expertise and strengthen relationships, KTH offers several forms of mobility for people from the public and private sectors: adjunct professor, affiliated faculty, industrial postdocs and corporate doctoral students.

The Adjunct and Affiliated Faculty Forum is held in order to maintain a dialogue with, and offer the opportunity for, Adjunct Professors and affiliated faculties to meet in a KTH environment.

Efforts to increase the societal impact of KTH's courses, study programmes and research

KTH aims to be a leader in the field of societal impact, with collaboration as a key driver.

KTH's work on societal impact is led by a coordinator together with impact managers at KTH's schools. The role of impact manager is held by deputy heads of school. Impact managers work to pave the way for increased societal impact, identify and monitor results and effects and communicate these effectively. One theme in 2024 has been the academic tariff of collaboration and societal impact.

In early 2024, KTH submitted its self-evaluation to the Swedish Higher Education Authority as part of the thematic evaluation of collaboration at Swedish universities. See the section entitled *Systematic quality enhancement activities*.

Other collaboration

In 2024, KTH continued to promote collaboration with small and medium-sized enterprises by making it easier for both companies and KTH's teachers and researchers to initiate and conduct collaborative projects. Meeting places that facilitate contact between companies and students are created by providing regular information about cooperation opportunities, through both mailings and activities such as degree project fairs, matchmaking events and other forums. These initiatives are also helping to build a dynamic and innovative environment for collaboration.

An important part of the work during the year has involved further developing the KTH degree project portal to improve its user-friendliness and further facilitate contact between students and employers. The portal gives companies, organisations, departments and institutions the opportunity to publish proposals for degree projects and advertisements for seasonal work and sparetime jobs. This strengthens the link between education and the world of work while giving students access to relevant assignments and jobs.

KTH has continued to develop partnerships with local study centres all over the country to further broaden collaboration. A number of pilot projects have tested ways of using infrastructure for laboratory sessions and projects in courses and study programmes, using local study centres as a platform. These initiatives have also created deeper contacts and new opportunities for collaboration with the business community in the municipalities where the pilots took place.

Fundraising

KTH's fundraising activities conduct long-term work to increase private external funding for KTH's education and research. A key part of the activities involves organising seminars and events aimed at increasing awareness of KTH's work and strengthening relations with societal stakeholders and others.

A number of events were organised in 2024, but the main focus was on preparing for 2027, when KTH celebrates its 200th anniversary. During the year, KTH received a bequest and a major donation with emphasis on conducting excellent research and implementing activities focusing on gender and technology that inspire and build knowledge about gender equality for the benefit of education and innovation.

Innovation office

KTH has worked closely with universities in the region since the innovation office was established. These partnerships have deepened over the years. KTH is allocated funding to provide support to other universities, in particular the Stockholm School of Economics (HHS), the Swedish School of Sport and Health Sciences (GIH) and Södertörn University (SH). KTH has collaborative agreements with these universities to provide services for innovation development and the transfer of funds to build up basic recipient expertise and own innovation support at each university. Innovation development services include support and advice on business development, funding, patents and recruitment. Together with KTH, the three universities have developed an action plan for activities and initiatives to strengthen innovation support on a local level. At the same time, KTH has opened its innovation support activities to individual researchers and students at the three universities.

In 2024, KTH expanded its collaboration with GIH within the innovation centre by developing a new GIH Innovation website linked to the support offered by KTH Innovation. The aim of this is to improve communication with students and researchers at GIH who have ideas they want to explore, and to ensure that the support offered by KTH benefits more people.

The Innovation Office implemented a joint programme, Ideate, in 2024 together with the SSE Business Lab at HHS and GIH. This aims to bring together students interested in innovation from the three universities and provide them with inspiration, tools and coaching to form teams around an idea and turn it into reality. A total of 33 students participated in this year's edition of the programme: 4 from GIH, 13 from KTH and 16 from HHS.

During the year, SH has continued to develop Innovation Station Flemingsberg, a co-working environment, innovation hub and meeting venue where SH's innovation activities with students and researchers meet both regional and international partners.

The innovation office at KTH has worked closely with Uppsala University on patent support and participated in experience sharing with other innovation offices since it was formed. The cooperation between the universities that make up the Stockholm Trio has been deepened and developed in 2024. Together, the three universities participated in the major Tech Arena trade fair held at the Friends Arena in Stockholm. This fair aimed to bring together stakeholders in the innovation system, funding bodies, start-ups, support organisations and other stakeholders with a view to strengthening innovation in the Nordic region.

Innovation support activities

KTH Innovation helps researchers, students and staff at KTH to commercialise their research findings and business concepts in the earliest phases.

The overall objectives for KTH Innovation are to:

- Create conditions that will allow innovations to emerge and develop throughout KTH in order to strengthen the competitiveness of KTH Royal Institute of Technology and the university's attractiveness as an innovative and entrepreneurial university.
- Make it possible for more ideas and results from KTH students, researchers and employees to reach out to the market and become successful innovations helping to bring about sustainable social development.
- Develop and run an effective and inclusive innovation process to support people with ideas and their journey towards the market in the best way possible.
- Further develop a strong ecosystem for innovation support at KTH with international connections.

KTH has been collaborating with the H&M Foundation and Accenture on the Global Change Award (GCA) concept for a number of years. The concept was reworked in 2024, and the new approach was launched at the GCA Summit in Mumbai in October. The focus is now on finding and supporting change leaders in the textile industry in the early phase of idea development.

KTH Innovation has expertise in process-oriented innovation development, and more than 3,700 people at over 2,800 organisations have registered to use the KTH Innovation Readiness Level™ tool. The organisations that have registered range from incubators, science parks and innovation offices to universities, global companies, charities, banks, public authorities and start-ups.

The KTH Innovation Readiness Level Summit – an interactive conference where 58 participants from 15 countries shared experiences and attended lectures and workshops on the tool over two days – took place for the first time in June.

The Brighter internationalisation programme took place for the twelfth consecutive year, this time with visits to Paris. The programme was open to innovation projects from KTH, HHS, GIH and SH and included five projects in the fields of digital deeptech and new materials. The aim of this programme is to increase participants' knowledge of entrepreneurship in an international context and create encounters between Swedish start-up companies and international stakeholders.

The fourth recipient of the KTH Innovation Award was announced in September 2024. This is an award established by KTH with donations from Professor Mathias Uhlén and Spotify founder Daniel Ek. The award recognises individuals from KTH who have tackled global challenges by exhibiting creativity, perseverance and courage. Mats Danielsson, Professor of Medical Imaging Physics at KTH Royal Institute of Technology, received the award this year. The judges' statement said, "The 2024 recipient of the KTH Innovation Award has developed technology that has helped patients and doctors all over the world. As the founder of several medical technology companies and coauthor of over 100 patents, Mats Danielsson has developed and implemented solutions that enable earlier detection of tumours and inflammatory diseases. Mats Danielsson is being presented with the KTH Innovation Award

for his contributions to the field of medical imaging physics, his creativity, courage and perseverance in transitioning from research to impact, and his commitment to improving both lives and the medical system."

In May 2024, KTH welcomed the Swedish and Danish royal couples, the Swedish Minister for Education and Minister for Foreign Affairs and the Danish Minister for Foreign Affairs. The visit focused on space technology, and participants were treated to panel discussions with three astronauts: Christer Fuglesang, Marcus Wandt and Andreas Mogensen. There was also an exhibition involving six spin-off companies with space applications and KTH's Space Centre.

KTH Innovation's focus on collaboration between start-ups and industry was further developed during the year, and initiatives included two theme days at KTH. One of these focused on the airport of the future in collaboration with Swedavia, and the other on sustainable forestry with pulp and paper company CMPC. These theme days aimed to highlight challenges facing the industry and how new innovations and collaborations with start-ups can be part of the solution.

KTH Innovation received 401 new ideas in 2024, of which about 35 per cent came from researchers and 65 per cent from students. The commercialisation projects supported by KTH Innovation have attracted a total of just over SEK 58 million in funding from parties such as Vinnova's Validation for Application programme. 23 new companies were created during the year, of which 9 are research companies, and 28 patent applications were filed. 29 projects were admitted to the pre-incubator programme at KTH Innovation during the year, and 9 companies were admitted to Swedish and international incubators. Moreover, KTH Innovation was also launched under a new name, KTH Innovation Launch. Stockholm's innovation ecosystem is one of the most developed in the world, and there are many alternative routes to market that mean that most companies undergo further development in ways other than via a traditional incubator.

Gender equality, diversity and equal opportunities

KTH's ethical policy states that gender equality between men and women and rejection of all forms of discrimination are both a quality matter and a natural element in the university's core values. KTH's vision and overall goals for 2024–2028 highlight the university's role in enabling a sustainable and equitable society. Gender equality, diversity and equal opportunities, JML, is integrated in all four target areas: education, research, working and learning environment, and efficient and sustainable use of resources.

KTH's gender mainstreaming work is based on the Plan for continued work for a gender-equal KTH. This plan has four priority areas: collective organisation, knowledge and awareness, equal conditions and inclusive cultures. These are the same areas as for the university's focus areas for gender mainstreaming in 2023–2025, as reported to the government.

Collective organisation

Collective organisation refers to a structure for systematic gender equality, diversity and equal opportunities work, linking together discrimination legislation, working environment legislation, gender mainstreaming and work on the core values and pursuing these aspects in the same way throughout KTH.

KTH conducts research-based proactive work with a view to increasing gender equality, diversity and equal conditions from an intersectional perspective throughout the entire university organisation. This is based on legal requirements, government mandates and KTH's own regulations. Gender equality, diversity and equal opportunities work involves staff and students at all levels and focuses on both structural and cultural aspects of inequality and gender inequality.

Strategic management of gender equality, diversity and equal opportunities efforts

The President leads KTH-wide gender equality, diversity and equal opportunities work, while the Heads of School and the University Director are gender equality, diversity and equal opportunities officers, JMLAs, for their respective parts of the organisation. Management meetings focusing on gender equality, diversity and equal opportunities aspects are held several times per semester and are chaired by the President. Student representatives are involved in the work.

The KTH Equality Office is a function within the human resources division at operational support that coordinates and supports the university's work with gender mainstreaming and work on the core values to promote an inclusive culture and equal conditions and to counter discrimination. A gender equality, diversity and equal opportunities partner at the schools' University Administration supports the JMLAs.

Each JMLA is responsible for driving and monitoring gender equality, diversity and equal opportunities efforts at their school and within operational support. This work is done in close cooperation with the KTH Equality Office. THS has a study environment officer who works together with KTH on these matters. JMLAs organise at least one local gender equality, diversity and equal opportunities group in their own organisation. All JMLAs also work to create inclusive cultures at KTH in both the working and the learning environment, with emphasis on zero tolerance of sexual harassment and other core values. The JMLA functions work with the schools' faculty renewal officers to ensure a more equitable process when it comes to recruitment and promotion.

Inclusive leadership

Several KTH schools have been training managers in inclusive leadership for a number of years, with the help of an external provider. This is helping to enable continuity in leading change to create a good working and learning environment characterised by gender equality, diversity and equal opportunities.

Integration of gender equality, diversity and equal opportunities into the Sustainable Development Goals

The fact that gender equality, diversity and equal opportunities are integrated into sustainability efforts at KTH was clarified when a decision was made on KTH's sustainability goals for the period 2021–2025. For example, one goal was that KTH's sustainable development and gender equality efforts should be integrated into the organisation. All employees and people working on behalf of KTH must have knowledge and be given the opportunity to contribute on the basis of their role.

Knowledge and awareness

Knowledge and awareness involves raising awareness about gender and gender equality throughout the organisation. This must be done in such a way that the knowledge can be put into practice, both in society and at KTH, in fields such as leadership development, teaching and learning in higher education and courses and study programmes. Research-based gender knowledge forms a basis for problem description and analysis, while knowledge of change work in organisations is crucial for gender equality work in practice.

Integration of gender equality, diversity and equal opportunities in education

Various initiatives have been implemented over a number of years to integrate knowledge of gender equality, diversity and equal opportunities into courses and study programme at KTH. Gender equality, diversity and equal opportunities must be integrated into all degree programmes at all levels so that students can help ensure the sustainable development of society after they graduate. That is why sustainable development also serves as an entry point for knowledge about gender equality, diversity and equal opportunities in education.

Gender equality must be reflected in processes, decisions and

regulations. KTH has a compulsory module known as Spår 1 (Track 1) that aims to provide a basic knowledge of gender equality, diversity and equal opportunities in order to achieve KTH's core values, the gender equality policy goals and the government's gender mainstreaming assignment. This module must be included in all programmes at all levels and examined within the course that includes the module. Track 1 provides the following information about gender equality, diversity and equal opportunities:

- what the terms gender equality and equality mean
- how they are linked to sustainable development
- how gender inequality and inequality may be expressed
- that gender equality and equality require change work.

Third-cycle education also provides a scholarly perspective on gender. Teaching and learning in higher education must also include knowledge of gender awareness and inclusive teaching and learning.

When designing track 1, there is a clear structure in place indicating when and how mainstreaming takes place in each programme, and a clear structure for monitoring via programme analyses in the quality system. Support for Programme Directors and teachers with regard to implementation is provided through a web-based resource known as Necessären, other training materials, a teaching and learning in higher education course entitled *Gender research and gender equality in technical higher education*, and workshops. The examination for the course consists of work with the courses and programmes taught by the teacher themselves, from a gender equality or gender perspective.

The aim of mainstreaming is to allow teachers to promote a gender-equal, non-discriminatory learning environment by means of aspects such as procedures and information aimed at counteracting harassment and sexual harassment. It also includes teachers practising gender-sensitive and inclusive teaching and learning as part of KTH's core values.

Gender equality, diversity and equal opportunities work as part of the Unite! cooperation

KTH is part of the European university alliance Unite! and its work on gender equality, diversity and equal opportunities issues. A virtual support structure will be created during the 2023–2026 programme period. Materials have been developed under this framework in 2024, such as a digital training programme jointly created by the nine participating universities. The aim of working together on gender equality, diversity and equal opportunities issues within Unite! is to raise awareness of such issues and create safer, more inclusive working and learning environments across all nine partner universities.

Equal opportunities

Equal opportunities refers to equal conditions in terms of pay, power and career.

Gender mainstreaming in recruitment

In 2024, KTH continued its efforts to increase the proportion of women among newly recruited professors: see the section entitled *Staff*. Efforts have also continued on increasing the proportion of women in other senior academic positions and in leadership positions, among students and among teachers and researchers. Initiatives have also been implemented in recruitment for courses and study programmes to boost the number of female students: see the section entitled *Education*.

Partners in Learning, PIL

The PIL programme is a career support programme for assistant professors. This programme is delivered regularly. It is led by two expert researchers and includes modules on gender equality, diversity and equal opportunities aspects and core values.

Continuous monitoring within the quality system

Gender mainstreaming and active anti-discrimination measures are integrated into and followed up in the quality system, including the schools' faculty renewal and faculty development plans. 2024 saw the launch of the revised quality system for education: see the section entitled *Systematic quality enhancement activities*. This meant that the questions included in the monitoring of degree programmes were reworked. This also applies to gender mainstreaming issues, where the programme director would analyse mainstreaming in the subject and the study environment.

Broader recruitment and participation

In 2024, KTH worked to implement the recommendations from the UKÄ's thematic evaluation of broader recruitment. The Faculty Council has had a working group focused on developing a general strategy for broader recruitment and participation.

Inclusive cultures

Inclusive cultures are based on an awareness of core values, codes of conduct and how to create an inclusive culture. It also includes awareness of the relationship between sustainable development and gender equality, diversity and equal opportunities issues, a clear zero tolerance approach to harassment and discrimination, and transparency and clarity in communication about gender equality, diversity and equal opportunities initiatives at KTH.

Prevention of sexual harassment and gender-based vulnerability

KTH has initiated the Research and Collaboration Programme against Sexual Harassment and Gender-based Vulnerability together with the Karolinska Institute, Malmö University and the Swedish Secretariat for Gender Research at the University of Gothenburg. A comprehensive national prevalence study on the occurrence of sexual harassment in the Swedish higher education sector was conducted in 2021 within the framework of the programme. A national results report was published in 2022, followed in early 2024 by a report that included KTH's findings from the study. This was entitled *Double discrimination against women. A report on gender-based violence in the form of incivility and sexual harassment at KTH*. This KTH report also includes specific suggestions on how sexual harassment and incivility can be discussed at workplace meetings, for example, and has been widely used at the university.

Orientation of new students

During the year, KTH, in cooperation with THS, continued its work on the systematic mainstreaming of gender equality,

diversity and equal opportunities in reception activities. Around 600 students who arrange orientation activities received training during the year on gender equality, diversity and equal opportunities, and also on dealing with sexual harassment and racism.

Dare to Care

2024 saw the initiation of a collaboration involving KTH, THS and the Swedish Association for Sexuality Education (RFSU) to implement the Dare to Care concept within the framework of the student union's activities. Dare to Care is a promotional initiative for reciprocity in all sexual encounters and opposes sexual assault. To date, Dare to Care has mainly operated in festival environments. The collaboration initiated means that KTH has become the first Swedish university to work with RFSU on a long-term strategic initiative to make Dare to Care an integral part of the student environment.

Environment and sustainable development

KTH's vision and overall goals set out the ambition to take the lead in sustainable development. As a technical university, KTH has a key role to play in influencing social development in a positive direction in order to contribute to the 2030 Agenda and the UN's 17 Sustainable Development Goals.

KTH's courses and study programmes provide the next generation with the knowledge and skills they need to address current and future challenges. If the university is to contribute to a sustainable society, it is vital for KTH's research to be passed on and put into practice. That is why KTH places great emphasis on collaboration with various societal stakeholders, and on highlighting research findings.

KTH has the commitment and leadership to go on developing and enhancing environmental and sustainability work. KTH's strategic efforts on these issues are based on the stated vision and overall goals for KTH and KTH's sustainable development policy. The general sustainability goals for 2021–2025 and the climate goals for 2021–2045 concretise what is to be achieved and what measures are to be implemented. In November 2024, the University Board decided on changes to KTH's sustainable development policy. The purpose of this is to clarify the basic principles for strengthening and further developing KTH's environmental and sustainability work based on KTH's vision and overall goals. The updating of the sustainability policy included aspects such as clarifying the responsibilities of all employees, the importance of leadership and monitoring, ethical reflection in education and research, and implementation of resource-efficient processes to reduce our environmental and sustainability impact.

Organisation and working methods

KTH Sustainability Office is tasked with supporting KTH's efforts to integrate sustainable development into operations. During the year, KTH has followed up on its efforts to achieve the sustainability goals with the associated action plan thanks to dialogues at management level in both spring and autumn. An in-depth sustainability report has been produced and presented to the University Board. Annual reporting to the Swedish Environmental Protection Agency and the Government has also taken place. During the year, data was produced for the rankings in which KTH participates and which include questions on the environment and sustainable development. KTH has participated in national and international meetings and networks and worked on coordinating and managing KTH's certified environmental management system. The radiation safety management system has been established in 2024 and is being coordinated within the framework of the annual monitoring of the environmental management system at management level. Various projects and activities are being run within the framework of the action plan drawn up for attainment of the sustainability goals.

The digital internal training programme Sustainable development at KTH, which is aimed at all employees, was conducted during the year in connection with induction for new employees, for example, and in a workshop format with KTH's management group and divisional planning days. In-depth monitoring of the chemical product inventory took place in 2024, and subsequent actions have been completed or are ongoing. An introduction to the KLARA chemical management system is provided at regular intervals throughout the year.

Environmental management system and ranking

KTH is driving the implementation of the 2030 Agenda and the Sustainable Development Goals within the framework of the environmental management system by linking KTH's degree programmes to the Sustainable Development Goals and ensuring that research projects describe how they are addressing the Sustainable Development Goals, for example. KTH's work with the 2030 Agenda and the Sustainable Development Goals is presented annually in a report entitled KTH Sustainable Development Goals, SDG.

This report describes how KTH contributes to all 17 of the Sustainable Development Goals, thus serving as a tool for communicating KTH's work with the 2030 Agenda and the Sustainable Development Goals to a wide audience, both within and outside the university.

For each goal, the report provides good examples of how KTH contributes to sustainable development in education, research and collaboration, and how we are working to reduce the environmental impact of our activities. Under SDG 12 Responsible consumption and production, examples are given of interdisciplinary research collaborations through Mistra Sustainable Consumption and the two-year Master's programme Sustainable Production Development, which focuses on sustainable design and development of sustainable production systems. Examples are also given of KTH's work on sustainable, circular furniture flows and sustainability requirements in connection with procurement procedures.

KTH's environmental management system has held accreditation to the international environmental management standard ISO 14001 since 2015, and is compliant with the requirements of the Environmental Management in State Agencies Ordinance (2009:907). KTH's environmental management system covers sustainable development in education, research and collaboration. It also includes impacts from its own operations, such as sustainable meetings, use of space and energy in buildings, procurement, chemical and waste management, food and catering, and biodiversity.

KTH has conducted annual internal and external environmental audits where suggestions for improvement are highlighted so as to go on developing environmental and sustainability work. The internal environmental audit examined how circular flows and waste management were handled in

the context of ongoing campus relocations. Random checks of KTH's waste management were also carried out.

During 2024, KTH has followed up on efforts to achieve the sustainability goals by means of dialogue at management level within the organisation. This monitoring has covered the following areas:

- integration of sustainable development within the quality system for education and research
- mainstreaming of sustainable development within lifelong learning and the Future Education at KTH change programme.
- the mission of the faculty boards and their responsibilities for sustainable development
- sustainable development in recruitment and promotion processes
- the need for continuing professional development promoting employees' awareness of sustainable development
- how researchers address sustainability issues in their research and strengthen interdisciplinary research to enhance the ability to resolve complex societal problems.
- how KTH's climate impact has been reduced through the implementation of aspects such as sustainable meetings, more efficient use of premises and energy, better waste management and improved resource management through features such as circular flows in respect of the goods and services used to conduct education and research.

KTH was ranked 72nd (46th) of 1,963 participating world universities in the THE Impact Rankings, which focus on the UN's 17 Sustainable Development Goals and the implementation of the 2030 Agenda. This result is slightly worse than the previous year. This should be regarded against the fact that the number of participating universities had increased from 1,591 universities to 1,963. KTH participates in the QS World University Rankings: Sustainability and was ranked 66th (58th) out of 1,751 participating universities worldwide. See the section entitled *Research*.

KTH improved its QS ranking in the field of Environmental Sciences to 74th (78th) during the 2023 to 2024 period. KTH's ranking declined in the Academic Ranking of World Universities, Environmental Sciences and Engineering, to 401–500 (301–400) and to 201 (250) in the Environmental Science and Engineering subject in the National Taiwan University Ranking.

Education

KTH has university-wide sustainable development goals in education that are systematically followed up in both the environmental management system and the quality system. There are a number of courses on teaching and learning in higher education in order to develop the skills of KTH's teachers in the mainstreaming of sustainable development in education. As well as integrating sustainable development into all KTH programmes, there are also programmes that focus specifically on sustainable development. A new two-year Master's programme focusing on sustainability, Sustainable Digitalisation, was launched at the School of Electrical Engineering and Computer Science in 2024. When it comes to degree programmes focusing on sustainability, there are two Master of Science in Engineering programmes, ten Master's programmes and one doctoral programme. The number of courses categorised as relating to the environment and sustainability has fallen from 985 in 2023 to 963 in 2024.

The new monitoring for first and second-cycle programmes was implemented in autumn 2024 within the quality system for education. Programme directors report on aspects such as sustainability integration within the programme and indicate the CDIO level achieved. In this self-evaluation, around 70 per cent of respondents indicated that they had achieved the intended CDIO level.

In 2024, KTH, together with eight other universities, received a total of SEK 30 million for development of short courses for professionals who want to further their education in respect of society's green transition. Of these funds, SEK 4 million was awarded to KTH, which has spent them on supporting 12 course development projects. The project builds on a previous government mandate known as Open for the Climate, where KTH developed open, online courses to support society's climate transition. These courses are published on the Learning for Professionals platform, where the new courses funded in 2024 will also be available. All courses are free of charge and accessible to all, and require no prior knowledge. See the section entitled *Education*.

Research

Research promoting sustainable development is key to KTH and is conducted at all five KTH schools. There is strong basic and applied research that contributes to new knowledge and resolving societal challenges in the immediate future. Research to address both the climate challenge and other sustainability goals is conducted in many disciplines. A number of strong research domains that are important for societal transformation are represented at research centres working in various fields. These also interact with other societal stakeholders to ensure the relevance of research and increase the pace of implementation of results.

External research funding from four funding bodies with specific emphasis on sustainability is one of a number of indicators used to monitor sustainability in research. These funding bodies are Formas, the Swedish Energy Agency, Mistra and the Swedish Environmental Protection Agency. For several years, funding from these sources has accounted for around 13 per cent of the total external research funding available.

According to KTH's own bibliometric survey, publications focusing on sustainability will account for 21 per cent of total publications in 2023. This is measured with a one-year lag. In relation to the 17 UN Sustainable Development Goals, the most notable publications focusing on sustainability are SDG 7 Affordable and Clean Energy, SDG 11 Sustainable Cities and Communities, SDG 9 Industry, Innovation and Infrastructure, and SDG 3 Good Health and Wellbeing.

According to the applicable indicator, 4 per cent of the faculty had a clear link to sustainability in 2024, the same as the year before. This figure for advertised teaching posts was 55 per cent, which is up 27 percentage points on the previous year.

Collaboration

KTH is strengthening its position as a leading technical university in the field of sustainable development through extensive collaborative activities. KTH's SDG report also highlights

the university's collaborative efforts to contribute to the 2030 Agenda and the Sustainable Development Goals. The report shows how KTH is actively working through interdisciplinary research platforms and partnerships with external organisations to create innovative solutions for a sustainable future. Bibliometric data shows that KTH's efforts have a particularly strong societal impact in respect of the goals for sustainable energy, sustainable industry and sustainable cities. KTH's strength lies in identifying links between the Sustainable Development Goals and creating solutions together with partners that address multiple challenges simultaneously. For instance, under SDG 7, KTH is leading the open, online course *Geospatial Clean Cooking Access Modeling using OnStove*, which provides various stakeholders in the private and public sectors and civil society with the knowledge and skills needed to promote access to sustainable cooking methods regionally. KTH Innovation has been strengthening the development of knowledge and expertise in technology and innovation at KTH for a long time, often in collaboration with industry with a view to supporting sustainable development. KTH is working as part of the collaborative project Stockholm Sensible Lab with the City of Stockholm and the Massachusetts Institute of Technology, MIT, to investigate ethical aspects of work on smart cities, SDG 11.

KTH is working with sustainability issues in strategic partnerships with the City of Stockholm, the Stockholm Environment Institute and the Swedish Environmental Research Institute. KTH has arranged more than 115 events, workshops, seminars and activities focusing on sustainable development during the year in order to develop collaboration and discussions with existing and new partners, stakeholders and students. Sustainability-related mentions in Swedish media fell from 39 per cent in 2023 to 36 per cent of all mentions in 2024. However, the international presence and focus on sustainability in the international media has increased. The percentage of sustainability-related mentions in international media increased from 45 per cent in 2023 to 55 per cent of all international mentions in 2024.

KTH has also taken a leading role in a number of national contexts. KTH sits on the board of the DG Forum together with Formas and others, and is responsible for coordinating the forum's annual operational plan. The DG Forum is a platform for collaboration between public authorities for implementation of the 2030 Agenda in central government. As part of the climate network for universities, KTH is leading a project to standardise calculation methods for business travel. KTH is continuing to contribute expertise to councils and delegations, including the City of Stockholm's Scientific Council for Sustainable Development. Funding for several research projects has been obtained through the Stockholm Trio for Sustainable Actions, and a network for sustainable fashion and textiles has been established. A full-day seminar was held to strengthen collaboration between the fashion industry, the academic community, departments and public authorities.

KTH participated in a conference with ISCN, the International Sustainable Campus Network, in Lausanne and presented work on sustainability reports and climate calculations. ISCN is an international network involving more than 90 universities from different parts of the world and working on sustainable development.

Resource management

Travel and transport

During the year, KTH has investigated the implementation of a carbon budget as a way of reducing the climate impact of business travel. As part of this work, workshops were held at divisional level during the year at four of the five schools, and also with the operational support team. The purpose of these workshops was to create an understanding of their own emissions, to familiarise themselves with carbon budgeting and to discuss allocation keys, in order to discuss in a next step what actions are needed to bring emissions at divisional level into line with the overall climate goals.

KTH is a member of the steering committee for the universities' Climate Network. A KTH researcher works on behalf of the Climate Network to lead the Climate Network focus group on business travel. Work enabling comparison between universities and higher education institutions through methodological development continued in 2024 within the framework of this focus group. The focus group is also examining policies and instruments for reducing the climate impact of meetings in line with the Paris Agreement. An international collaboration has been launched with Swiss universities as part of the Climate Network focus group in order to review methodology and behavioural changes aimed at reducing emissions from business travel.

KTH's sustainability goals for travel and transport must be achieved by the end of 2025 at the latest, with a base year of 2019. According to KTH's goals, its climate impact from business travel (carbon dioxide equivalents, CO_2e, per full time equivalent) must be reduced by 40 per cent by the end of 2025. KTH's total climate impact from business travel, excluding hotels, fell by around 19 per cent (carbon dioxide equivalents per full time equivalent) in 2024 compared to 2019. Air travel accounts for the majority of emissions from business travel, standing at around 99 per cent in 2024. Air travel accounts for about 85 per cent for business travel including hotels. See the KTH report on the 2024 environmental management programme to the government and the Swedish Environmental Protection Agency.

Procurement and waste

KTH has developed its procurement processes by ensuring that sustainability requirements are included in relevant procurement procedures. KTH has developed a new guideline on procurement and purchasing that includes needs analysis and sustainability aspects. In the autumn semester of 2024, KTH has implemented what is known as a spend analysis tool that will be able not only to highlight more clearly the monetary parts of the purchase analysis, but also to be used for environmental purchase analyses.

As part of the Circular Furniture Flows project, KTH has procured a digital inventory tool to promote good resource management and circular economy. The digital inventory tool is intended to enable the cataloguing and reuse of furniture during upcoming campus relocations, for example. The tool will also serve as a form of system support for cataloguing and monitoring of indicators and KTH's sustainability and climate goals.

KTH has developed a Circular Economy Strategy in 2024 to support the organisation in respect of waste management and circular economy. This strategy aims to provide guidance for

the development of KTH's sustainability and climate goals for the period 2026–2030 within the Resource Conservation goal.

During the year, KTH commissioned a central environmental station for fractionated waste in order to reduce the load in existing waste rooms and reduce heavy traffic and carbon emissions, CO_2, at KTH Campus. Furthermore, KTH has been working on a review of the need for waste sorting furniture in first-cycle teaching areas and developed action plans for these areas. 458 devices were reused in 2024, through contracted suppliers, in order to reduce waste generation and increase the circularity of IT products. This resulted in climate savings of 82,615 kg of CO_2 and SEK 116,551 in capital returned to KTH.

Sustainable buildings

A number of energy-saving measures were implemented at KTH Campus in 2024 in order to reduce energy consumption. Altered opening hours during academic breaks have resulted in reduced energy use and helped to increase security on KTH campuses. Work has continued to address the anomalies identified during the 2023 night walk, when a number of energy saving measures were identified. Measures have been implemented to reduce energy consumption at the Parallel Computer Centre (PDC). KTH has continued its work on automatic shutdown of computers. Akademiska Hus, in collaboration with KTH, has applied for funding for solar panels via an EU project.

In 2024, KTH has participated in the focus group for sustainable buildings within the universities' climate network. The working group produced the guidance Hållbara byggnader och lokaler – vägledning för Sveriges lärosäten [Sustainable buildings and premises – guidance for Sweden's universities], which was adopted as an SUHF recommendation (REK 2024:7).

Several of the buildings used by KTH for its activities hold environmental certification according to Miljöbyggnad. The solar panels installed on Campus Södertälje were commissioned in 2024.

KTH Campus was used for various research and educational activities for sustainable buildings during the year in collaboration with Akademiska Hus and various corporate partners. A joint research project was conducted between KTH and Akademiska Hus during the year with the support of an externally employed doctoral student, who has written a thesis entitled Human-Centric Operations of Smarter Higher Educational Buildings in Sweden.

2024 saw the continuation of the project to optimise premises for operational support and work on the relocations of campuses from Kista and Södertälje. Digital twinning and sensor technology have been used to map occupancy rates within the framework of KTH's premises optimisation project. This work will help to achieve KTH's sustainability goal of increased efficiency in the use of premises.

During the year, the KTH Live-In Lab launched new projects looking at how people's behaviour affects the energy performance and light quality of buildings. Two new EU projects have been launched to study the impact of thermal and hybrid energy storage systems in order to improve the flexibility of buildings for the electricity grid. Other ongoing projects include studying the performance of solar panels, electricity storage systems and ground source heat pumps. All projects use data and test beds from the KTH Live-In Lab.

In 2024, Akademiska Hus evaluated the redevelopment of lab premises in Kemikvarteret, regarding the project's environmental goals in respect of CO_2e footprint. A number of products have been reused during the production period, thus leading to savings in terms of climate impact; within the project, internally, and through donations to other projects and stakeholders, externally.

Food and catering

During the year, KTH introduced One Planet Plate (OPP) to reduce the environmental and climate impact of meals, in close cooperation with the World Wide Fund for Nature, WWF. This concept limits carbon emissions to a maximum of 0.5 kg per meal and promotes climate-smart food choices as well as supporting biodiversity. This is done by encouraging the use of plant-based ingredients and meat from natural pastures, reducing food waste and prioritising local, eco-labelled products. Clear evidence of the effectiveness of the initiative was demonstrated at KTH's degree ceremony at Stockholm City Hall, where the carbon footprint was reduced from 9.5 kg per person to 0.97 kg – down 90 per cent. This strategic approach demonstrates KTH's leading role in putting sustainability principles into practice and shows how conscious decisions and choices within the organisation can help to bring about significant environmental improvements.

Biodiversity and ecosystem services

KTH aims to promote biodiversity through practical application on its campuses, which can be viewed as a living laboratory for students and researchers. KTH's biodiversity efforts are integrated into the university's overall sustainability work and help to create a vibrant and sustainable campus environment. Collaboration with property owners has been key to this work.

The Albano campus is an example of good cooperation and is certified according to Citylab, a certification system for planning and management in the urban development process. This includes innovative water systems, improved microclimates and outdoor environments that enhance dispersal pathways for flora and fauna. KTH is constantly working to develop its campuses in ways that support biodiversity. This includes creating meadows, planting trees and maintaining beehives and planters. A new campus plan focusing on sustainability and biodiversity is planned for 2025

Systematic quality enhancement activities

KTH's quality system

KTH's quality system is based on the quality requirements set out in the Higher Education Act, the Higher Education Ordinance and European standards and guidelines for quality assurance in higher education. Quality enhancement activities aim to develop KTH's research and education in accordance with KTH's vision and overall goals. The quality system is made up of two parts: one for education at all levels, and one for research. The system also includes monitoring of academic skills supply for education and research.

The Faculty Council bears overall responsibility for issues related to quality in courses and study programme, research and collaboration. The Faculty Council is also responsible for managing and developing the KTH quality system.

Monitoring of research

Based on the pilot study carried out in 2023, the Faculty Council decided in 2024 that the quality system for research should undergo development. A reference group with broad representation from the faculty was set up in order to devise a revised system. This work began in the autumn and will continue next year.

The annual monitoring of research carried out in 2024 used indicators for external research funding and publication at each school. The data was used as a starting point for operational dialogues in the autumn, which aimed to discuss research quality. Further development work is to be done on the indicators so that they can provide a recurring foundation for the annual monitoring of quality in research.

Monitoring of faculty renewal and development

The faculty's subject-related and educational continuing professional development are important prerequisites if KTH is to be able to maintain high quality in its courses, study programmes and research. This is why the composition and skills of employees are analysed within the framework of the quality system.

This year's monitoring of the schools' faculty renewal and faculty development plans focused on aspects such as planned promotions, recruitment needs in the next few years and the percentage of people in the researcher category who hold qualifications required for appointment as docents. Monitoring in both 2024 and 2023 showed that employment categories are not used entirely consistently at KTH, so this needs to be addressed.

The faculty renewal and faculty development plans used by KTH for annual monitoring and to provide opportunities for academic staff to develop their careers, have not functioned optimally. The President decided during the year that KTH's career system should be reviewed. An external commissioner, together with the Vice Dean of Faculty, delivered a final report on this in the late autumn of 2024. A review of the faculty renewal and faculty development plans will commence after decisions have been made on career paths. See the section entitled *Staff*.

Revised quality system for education

A new guideline on systematic quality enhancement activities in education was adopted in 2023. The new system came into force on 1 January 2024. This quality system is made up of two main components: annual monitoring and programme monitoring.

The quality system aims to support ongoing development work and also evaluates the quality of KTH's courses and study programmes. These quality enhancement activities aim to provide personal support to KTH staff when it comes to identifying strengths and weaknesses, defining areas for development and following up on measures implemented and development activities. Students and doctoral students will also be given the opportunity to participate in the work. If quality defects are detected, they can be addressed and remedied according to the procedures in the quality system. The annual monitoring for first and second-cycle programmes focuses on the quality of courses. For doctoral programmes, the annual monitoring includes monitoring of the study environment, supervision, goal attainment and progression, in addition to course quality. Programme monitoring takes place every two years and focuses on identifying shortcomings, areas for development and good practices. The associated development plans set out the activities to be undertaken for further development of programmes. Dialogues on the outcomes of monitoring operations are conducted at both school and KTH level. At KTH level, the dialogue on general quality issues is integrated into the operational dialogues conducted by KTH's management as part of the operational planning process.

In autumn 2024, programme monitoring has taken place for all programmes at qualifying, first and second-cycle levels. This programme monitoring has indicated a need for a number of KTH-wide development initiatives. These aim to make students more capable of dealing with intractable problems, manage AI in teaching, increase the diversity of teaching and examination formats, and increase student completion.

KTH's annual monitoring of third-cycle education revealed a need for KTH-wide discussions on the dimensioning of third-cycle education, continued learning between KTH schools regarding support for effective supervision and guaranteed progression for doctoral students in third-cycle education.

During the year, a new digital course evaluation and analysis system was developed and tested on a limited number of courses, with a view to rolling it out to all courses by early 2025. The introduction of the new digital system means that course evaluation and analysis efforts, which aim to promote educational quality and continuous course development, will be more systematic and consistent at KTH. This will also reduce

the administrative workload for course coordinators, while also ensuring that all students and doctoral students have the opportunity to provide their feedback on the courses and receive the findings from the course evaluations.

International partnerships

Unite! quality enhancement activities

In 2023, the Unite! quality assurance working group devised a model for quality assurance and development of the alliance's activities. Every Unite! Working group is responsible for monitoring, developing and reporting on activities. The first reporting on certain activities took place in 2024. The findings show that the quality assurance model works well, but also that it needs to be further developed and then implemented in a larger proportion of Unite! activities.

Quality enhancement activities within Nordic Five Tech

The cooperation between the five biggest technical universities in the Nordic region, Nordic Five Tech, has a working group that focuses on quality issues. During the year, the group continued working on further developing a model for what is known as *peer learning* of programmes by learning with and from one another. One starting point has involved developing a model that is so flexible that it can be adapted to the quality systems in place at each university. The model focuses on development of the participating programmes. During the autumn, the working group has planned a pilot study to be conducted with selected programmes in 2025. The working group also plays an important role in the exchange of experience and knowledge in various areas related to quality e nhancement activities.

Reviews and evaluations conducted by the Swedish Higher Education Authority

Coordinated review

In 2023 and 2024, the UKÄ conducted a pilot project involving coordinated review of contract education at all universities and university colleges. The coordinated evaluation also included an evaluation of courses and study programmes in estate agency. The KTH Bachelor's programme in real estate development specialising in estate agency was included in the evaluation. A total of ten programmes were included in the evaluation of courses and study programmes in estate agency. KTH's Bachelor's programme was one of three degree programmes to be rated as high quality. The programme organisation has taken on board the recommendations made to KTH by the assessment panel.

Thematic evaluations

UKÄ evaluated collaboration in education and research in 2023 and 2024. UKÄ's report and decision with recommendations to KTH were published in October. According to the assessment panel, KTH should include external parties in its efforts to develop goals for collaboration, clarify the goal that collaboration should be a mutual exchange, and develop a more consistent structure and organisation to support the individuals who run the collaboration. KTH is aiming to submit an action report in 2026.

In 2024, KTH submitted an action report on the work carried out following the UKÄ's thematic evaluation of universities' work on broader recruitment. The UKÄ made decisions based on the universities' action reports. The UKÄ shares the assessment panel's view that KTH has generally taken into account the recommendations made by the assessment panel to KTH in its evaluation.

Systematic safety and security work

The purpose of safety and security work at KTH is to create safety and security for employees, students and visitors. In 2024, the development of safety and security work at KTH has been carried out with emphasis on recruitment and establishment. This work has been characterised by the introduction of appropriate and effective safety and security solutions at an open, accessible KTH.

Physical security

With regard to physical security, active and systematic efforts have been made to protect property by preventing and hindering unauthorised access to university premises, and by preventing insecurity for employees, students and visitors in a manner adapted to suit each target group.

Operational safety

With regard to operational safety, KTH has made active and systematic efforts during the year to ensure regulatory compliance in the fields of biosafety, radiation safety, nuclear safety, chemical safety and fire. Efforts in these areas have focused on creating the best possible conditions, through centralisation, that will allow KTH to comply with applicable laws while also increasing support for operations. Work was also carried out during the year to ensure that events and visits to KTH are safe and secure.

Security protection

A security protection organisation has been established with a view to developing work in the field of security protection. A security protection analysis has been conducted in accordance with the Security Protection Act (2018:585), the Security Protection Ordinance (2021:955) and the Swedish Security Service's regulations on security protection (PMFS 2022:1). This security protection work has focused on setting up an organisation and working methods and beginning the work of supporting the organisation in the assessments and measures required for compliance in respect of security protection.

Information security

During the year, KTH conducted a review of the work that follows from the General Data Protection Regulation. The report on these reviews will form the basis for further development of the university's organisation and capacity in this field. This will also include management of research data.

A survey has been initiated in order to pave the way for systematic, continuous and risk-based information security efforts at KTH. The survey aims to provide a situational analysis in the field of information security and strengthen KTH's future capabilities for identifying and managing risk.

With regard to information security, more systematic information security work has begun to be introduced in the KTH organisation on account of an information security management system, also known as LIS. This management system has to comply with the international information security standard ISO 27001 and the Swedish Civil Contingencies Agency's regulations on information security for government agencies (MSBFS 2020:6). The management system has to form the basis for efforts to identify threats, understand risks and become aware of vulnerabilities, as well as being able to work systematically on improvements throughout the organisation. There has been no analysis of threats or risks, and no specific risk analysis looking at information security has been carried out during the year. There has been no evaluation of information security at KTH.

KTH has provided internal information on planning for the introduction of a management system for information security. This information aims to raise awareness about information security initiatives within KTH.

Personal safety

In the field of personal safety, KTH has begun to introduce appropriate, proactive and reactive personal safety work as an integral part of KTH's systematic work environment management. Efforts in this area aim to create a safe, secure and security-conscious KTH for employees and students.

Crisis management

A university-wide organisation has been established in the field of crisis management. Members of the KTH central crisis team and local crisis teams at KTH schools and SciLifeLab have received training and completed drills on staff work, and on assessing and managing events.

Responsible internationalisation

KTH is aiming to strengthen the coordination of security issues linked to international activities and responsible internationalisation efforts. Transparency must form the basis of international cooperation. That said, there has to be an awareness of the need to protect national interests, know-how and technology.

Responsible internationalisation refers to the ability to manage and reflect on international research and education collaborations, taking into account the benefits of collaboration in relation to aspects such as undue foreign influence, dual use, ethical dumping and human rights.

KTH, together with the Swedish Foundation for International Cooperation in Research and Higher Education (STINT), the Karolinska Institute and Lund University, has developed guidelines for reflection on international collaborations. These guidelines are intended to strengthen and raise awareness of

KTH's responsibility as an international university and the ability of its researchers to reflect on international collaborations.

Two groups were set up during the year to coordinate responsible internationalisation: an advisory group and a steering committee. The advisory group assists operations at KTH with risk management regarding aspects such as employment, admission to third-cycle education and inviting guests for longer stays, external funding, external collaborations and certain matters linked to KTH Innovation. The advisory group is able to escalate to the steering committee any issues of a strategic nature that may affect the KTH brand, or where there may be elements of risk-taking.

Export control

KTH works systematically with export control in order to support researchers with export control classification of hardware, software and technical information in projects. This work also supports the organisation with applying for permits from the authorised public authorities, informing the organisation and conducting due diligence processes for partners and others.

2024 saw an increase in focus on export controls on account of the geopolitical situation in the world, extended sanctions against certain countries, greater emphasis on civilian and military research collaborations, and the EU's economic security strategy. Establishment of an advisory group and a steering committee for responsible internationalisation allowed KTH to increase its focus on collaborations and assessments of the risk of diversion of sensitive technologies.

Staff

KTH is a university that creates knowledge and expertise for a sustainable future. People with different backgrounds and experiences work together with the common objective of administering, renewing and communicating knowledge for the society of today and tomorrow. A number of activities conducted in 2024 in respect of staff are presented below, based on KTH's vision, general aims and operational plans.

Skills provision

One crucial competitive factor for KTH is its ability to attract, recruit, brief and develop staff.

The development of strategic skills supply for all staff categories is a work in progress. This will also be harmonised with the tasks initiated by the President in order to build an organisation for peer influence and responsibility, as well as a reinforced line organisation. In 2024, the President also initiated a review of KTH's career system for teachers and researchers. The strategic skills supply must ensure that KTH has access to the right skills in order to achieve the organisation's vision and goals.

The faculty's subjectrelated and educational continuing professional development are important prerequisites if KTH is to be able to maintain high quality in its courses, study programmes and research. This is why the composition and skills of employees are analysed within the framework of the quality system. See the section entitled *Systematic quality enhancement activities*.

The European Charter for Researchers and guidelines for recruitment of researchers

KTH endeavours to be an attractive employer for researchers at all stages of their careers, and since 2021 has been affiliated to the European Charter for Researchers and its guidelines for the recruitment of researchers. KTH has received the EU's HR Excellence in Research award. This award means that KTH has met many of the EU requirements for a responsible and professional employer. It also means that KTH is committed to continuous quality enhancement activities in the fields of ethical and professional responsibility, recruitment, continuing professional development, career support and working conditions for researchers. The quality and development work is monitored by the European Commission every three years.

The review of KTH's career system for teachers and researchers is one example of an activity conducted in 2024 that is in line with the European Charter and guidelines.

The Euraxess network

Euraxess is a European network under the European Commission that focuses on facilitating researcher mobility, promoting the career development for researchers, informing researchers of their rights, and highlighting available research positions across Europe.

As a network participant, KTH benefits from career development programmes, workshops and webinars for researchers. Euraxess Sweden offered the Career Outside Academia career support programme in the autumn of 2024. International doctoral students and postdocs at Swedish universities formed the target group for this initiative, which emphasised careers outside the academic community. The programme offered inspirational lectures, work with other young researchers and one-on-one coaching. 44 KTH employees applied, of whom 4 were accepted.

Skills supply and development within Unite!

KTH is one of nine technical universities in Europe that form part of the university alliance Unite!. This alliance provides opportunities for extended networking, skills exchange and career advancement within the EU.

The work of Unite! is organised into working groups. In 2024, the Professional Development and Training working group created a digital training catalogue presenting professional development opportunities for teachers, researchers, administrative and technical staff across all nine Unite! universities. This catalogue includes training programmes on topics such as teaching and learning, professional development, multiculturalism and internationalisation of working practices. There is particular emphasis on training programmes for early-career researchers. KTH arranged the Communicate Your Research to Non-Expert Audiences workshop in the autumn.

The Unite! joint training programme *Researcher Development Framework* and the Development Needs Analysis self-assessment tool for early-career researchers were also developed in 2024. This programme is designed to guide researchers at every stage of their careers, and the tool can help researchers to identify their professional training needs.

Work also began on 2024 on a career path guide for postdocs and early-career researchers.

Career development and support

Life and career planning is a coaching programme offering support for career planning, transition and career change. This programme is financed by joint funds from the employer and employee organisations at KTH. It ran twice during the year with a total of 35 participants, 24 women and 11 men.

A career inventory programme was also developed as part of a joint cooperation between KTH and the employee organisations. In 2024, this had 17 participants: 12 women and 5 men. Career support from KTH, the EU and other partners has been gathered together within a common web portal. Various career support events are also organised for doctoral students to help them plan for the period after they complete their third-cycle studies.

Recruitment of teachers

In the autumn of 2024, the University Board decided that as of 1 January 2025, the schools' faculty boards will have overall responsibility for preparing the appointment of teachers, professor and faculty affiliations and docent admissions. An employment committee and a docent committee were set up within each school's faculty board to deal with these matters. This shifts responsibility for skills supply from the President to the schools' faculty boards. This change is based on the

introduction of faculty boards in 2024 and the increased faculty responsibility for quality in education and research that rests with the faculty boards.

Cases for promotion of associate professor to professor and promotion of assistant professor to associate professor will continue to be handled centrally at KTH through the promotion committee under the KTH Faculty Council.

Decisions on appointment will be made by the relevant head of school, except for decisions on appointment of and promotion to professor, which will continue to be made by the President.

Introduction for new staff

All new employees are offered welcome days for an introduction to KTH's vision and goals, organisation and operations. An introduction to working conditions, tasks and expectations of the role is also provided. Role-specific inductions are also offered to doctoral students, for example. KTH supports employees who are new to Sweden by assisting with practical preparations for their arrival.

Continuing professional development

During the year, customised and role-specific continuing professional development was offered to leaders of collaborative research, for example. The year also saw the development of a new online course, *Managing research centres and other major research initiatives*, which was aimed at directors of centres, strategic innovation programmes and major EU projects. Additionally, work continued on a course on gender equality, diversity and equal opportunities and sustainability for the same target group.

In 2024, KTH also offered a course in advanced English at Cambridge University. There were ten participants on this course.

A total of 215 people, 69 per cent women and 31 per cent men, participated in some form of Erasmus+ staff mobility in 2024.

Activities relating to teaching and learning in higher education

In 2024, 10 (14) courses on teaching and learning in higher education for teachers were conducted with 241 (239) participants, of whom 108 (97) were women and 133 (142) men. These courses are designed in a way that enables participants to achieve the Association of Swedish Higher Education Institutions' recommended goals for qualifying courses in higher education pedagogy. The courses aim to develop participants' pedagogical skills, facilitate the development of courses, learning environments and degree programmes and contribute to networking between KTH schools. Examples of courses include *Digital learning in higher education and Learning and teaching in higher education*.

In 2024, 209 (213) doctoral students participated in the course *Basic Communication and Teaching*, of whom 77 (81) were women and 132 (132) were men.

Two major conferences were held and eight thematic groups, known as PriU groups, were coordinated in order to promote continuous dialogue on teaching and learning in higher education and networking among teachers, staff and students. The groups' work and questions are based on the interest of teachers, students and staff in various issues related to education. Themes for the groups' discussions include AI in teaching and examination, and the development and effective use of learning environments. The KTH-wide network meetings of the Directors of Studies and Programme Directors were arranged once a month in 2024, with topics such as new schedule management, faculty renewal and programme analyses. A new network for teachers with general qualifications for teaching and learning in higher education was initiated in 2024.

Furthermore, cooperation within the Stockholm Trio

Figur 16. Staff 2024

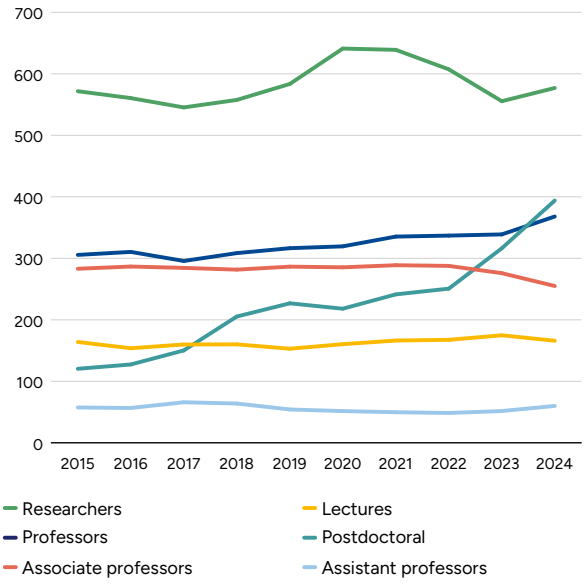
Per staff category

Women total	1,743
Men total	2,374
Totalt	4,117

Source: HR-system.

Figure 17. Number of teachers and researchers 2015–2024

Per staff category



Source: HR-system.

university alliance was strengthened in the field of teaching and learning in higher education by jointly and more cohesively offering courses on teaching and learning in higher education and pedagogical development support in learning for sustainability.

KTH has a representative in the Association of Swedish Higher Education Institutions' national expert group for issues relating to teaching and learning in higher education, and during the year this group focused on the formulation of the guidelines for teaching and learning in higher education for the member universities.

Relocation

A policy decision for KTH's international research and education collaborations for 2024–2028 was made by the President in 2024. KTH needs to have effective reception and integration procedures in place in order to strengthen KTH's international attractiveness as an academic employer, including the ability to recruit and retain talented researchers and teachers. KTH Relocation was expanded in terms of resources, and a major survey exercise began in 2024 with a view to developing these services.

A new strategic forum for collaboration has been launched by Stockholm Business Region in order to create an attractive and sustainable environment for international students, employees and accompanying persons in the Stockholm region. In addition to KTH, the members are Region Stockholm, the Stockholm Academic Forum, Stockholm Chamber of Commerce, a number of universities and the municipal cooperation Swedish for Professionals.

Management and leadership

There was further development of the work on management and leadership development in 2024. The leadership programme *Leading as a manager at KTH* is aimed at all newly appointed managers. Because of increased demand, two rounds of the programme began in autumn 2023, with 22 and 23 participants respectively. These programmes were followed up in the spring of 2024 with a Nordic Five Tech study visit to Aalto University in Helsinki and a Unite! study visit to the Technical University of Darmstadt. A programme with 24 participants began In autumn 2024: this will run until May 2025 and be followed up by a study visit in the autumn of 2025.

The *Inclusive leadership* programme was implemented at school level. The aim of this programme is to provide managers and leaders with greater awareness and knowledge of gender, intersectionality and culture, and how this can be translated into action.

In 2024, 35 programme directors started the training, which provides specific management tools to increase shared responsibility for gender equality, diversity and equal opportunities work, helping staff to work in operations on an equal footing.

KTH is still undergoing a period of intense change, and there has been a major need for leadership development and change management support in 2024. The initiatives have been implemented by means of management forums, training and coaching for management groups and groups of managers throughout much of the organisation.

In 2024, meetings of the President's management forum were held on two occasions. This provides an arena for discussion and dialogue on current development issues for KTH's management group, heads of department, deputy heads of school and heads of operational support divisions.

The University Director's management forums are held for operational support managers where participants have the opportunity to create awareness, understanding, dialogue and experience exchange on development work in progress in the field of operational support.

Twelve leaders from various parts of the organisation participated in the *Generative change management* programme in 2024. This programme aims to give managers and leaders the ability to confidently and safely lead complex change processes based on generative dialogue, inclusion and creativity. Attending the programme together with other KTH leaders gives participants the opportunity to share insights, ideas and experiences. A network was launched in 2024 to promote further learning and exchange of experiences, and this is aimed at everyone at KTH who has completed the training programme.

A newly developed training programme on the working environment, which was conducted in 2023 as part of operational support, was implemented for managers at school level in 2024. 30 managers from schools participated in 2024. This programme includes the basics of health and safety responsibility, criteria for the allocation of health and safety duties, the organisation of occupational health and safety at KTH and basic health and safety law.

In 2024, KTH participated in a mentoring programme with three mentees and three mentors. This is a mentoring programme with five other organisations from the public and private sectors.

In 2024, several universities in Stockholm collaborated on a mentoring programme that is to be launched in April 2025. This programme aims to support and develop managers in their roles and duties, pave the way for the exchange of experience between new and experienced managers and increase opportunities for cooperation between universities. The programme will continue for one year, and mentors and mentees are matched from different universities.

In 2024, five managers participated in a pilot activity that aimed to strengthen their team development skills and provide them with tools for improving their teams' working environment based on the results from the Employee Pulse survey. This development initiative is based on research-based exercises that support the creation of successful and sustainable teams. The aim is to establish new habits in daily working life using this method and specific exercises, thereby strengthening the shared work environment.

Based on the action plan for the development of operational support, work began on a KTH-wide introduction for new managers in 2023, and work on a leadership web platform began in 2024. This induction programme aims to make it possible for managers to cope with their responsibilities and duties in the role of new manager with responsibility for staff. The leadership web platform will enable all managers to plan their HR-related work throughout the year, fulfil their employer responsibilities and stay up-to-date thanks to readily accessible information.

Working environment

KTH Employee Pulse, KTH's university-wide employee survey, was conducted for the second consecutive year and takes place four times a year. The Employee Pulse survey is made up of short questionnaires asking ten recurring core questions. It also includes questions on one topic per questionnaire round: how to treat people, organisation and leadership, the physical

working environment or systematic occupational health and safety. The results are used as a basis for dialogue, and every group, together with their manager, has to implement measures to maintain good results and make improvements. The plain text comments feature was activated during the autumn surveys, which allowed employees to anonymously elaborate on their answers or make suggestions. The spring saw the launch of a pilot project designed to support managers in utilising the results from the Employee Pulse survey. See the section entitled *Management and leadership*.

Systematic occupational health and safety at KTH involves regular health checks, safety inspections, training programmes and digital support material. The schools compile annual working environment plans in which physical, organisational and social working environment activities are documented, implemented and followed up.

Working environment training for managers continued to be provided during the year. This includes the fundamentals of working environment responsibility and working environment law and is based on the delegation of working environment tasks that managers are allocated by their superiors. This programme will be undergoing further development and will be implemented for managers throughout KTH in 2025 and beyond. Efforts to introduce safety inspections for the digital working environment information system continued in 2024, and about half of the KTH organisation has started conducting safety inspections with the new support. The system continues to be used to report risk observations, incidents and accidents. Reporting has increased slightly compared to the previous year. The number of incidents reported increased, while risk observations reported fell compared to 2023. The assessment, as in the previous year, is that the reporting of risk observations is insufficient.

Employees at KTH

Evaluation of a pilot project in responsiveness shows that there is potential for development and interest in responsiveness issues at KTH. Customised interventions and other initiatives are needed in order to reach out to research students. The Employee Pulse survey carried out in February 2024 shows a positive movement in the thematic area of responsiveness since February 2023. Work on the responsiveness will continue in 2025.

Staff structure

Professors, visiting professors and adjunct professors

The number of full time equivalents in the professor group, which includes professors, visiting professors and adjunct professors, increased to 368 (339), 84 (75) women and 284 (264) men. The proportion of women increased by 1 percentage point compared to the previous year, to 23 per cent, and by 1 percentage point compared to 2022. The number of visiting professors in terms of full time equivalents remains at three, one woman and two men.

28 new professors and visiting professors were appointed in 2024. The proportion of women among these was 50 per cent. The proportion of newly recruited women in this category was 26 per cent in 2023, 44 per cent in 2022 and 36 per cent in 2021.

The number of adjunct professors fell in 2024, numbering 39 (46) at the end of the year, 8 (8) women and 31 (38) men. All adjunct professors are employed by KTH, but their primary activities are conducted outside KTH. The position comprises at least 20 per cent and no more than 30 per cent of full time hours, and hardly any of the adjunct professors receive a salary from KTH. The number of full time equivalents for people receiving salaries was rounded to zero full time equivalents in 2024.

Associate professors and lecturers

The number of associate professors fell to 255 (276) full time equivalents, 73 (78) women and 182 (198) men. The proportion of women was 29 (28) per cent. 26 new associate professors were recruited during the year, 13 women and 13 men. The proportion of women among new recruits increased by 30 percentage points compared to the previous year, to 50 per cent. The number of lecturers fell compared to 2023, to 166 (175) full time equivalents. The proportion of women in this category was 36 (39) per cent.

Career development positions: assistant professors and postdocs

At KTH, assistant professors and postdocs jointly form the Career-development position category. The number of career development positions increased to 454 (368) full time equivalents in 2024, 162 (124) women and 293 (244) men. In 2024, the proportion of women increased by 2 percentage points to 36 per cent.

17 new assistant professors were recruited during the year, 9 women and 8 men. The proportion of women among new recruits was thus 53 per cent, compared to 40 and 50 per cent in 2023 and 2022 respectively. The number of associate senior lecturers in terms of full time equivalents was 60 (52), 25 women and 35 men, while all teaching and research staff numbered 1,820 (1,714), 575 women and 1,245 men. The proportion of assistant professors among all research and teaching staff thus stood at just under 3 (3) per cent. The number of postdocs increased to 394 (316) full time equivalent students compared to the previous year, 137 (104) women and 257 (212) men. The proportion of women increased by 2 percentage points to 35 per cent. The large increase in full time equivalents for postdocs in the last two years can be explained by factors such as increased research grants that have made it possible to employ more postdocs, and by the fact that the employment period for postdocs has been extended to a maximum of three years from the previous maximum of two years.

Researchers and research engineers

The number of researchers and research engineers increased to 577 (556) full time equivalent students compared to the previous year, 195 (192) women and 382 (364) men. The proportion of women fell by 1 percentage point to 34 percent compared to 2023.

Doctoral students with employment

The number of doctoral students with employment increased to 1,059 (1,035) full time equivalent students in 2024, 374 (354) women and 686 (681) men. The proportion of women among doctoral students with employment was 35 (34) per cent.

Technical and administrative staff

The technical and administrative staff, including library staff, fell to 1,153 full time equivalents in 2024 (1,160 full time equivalents in 2023 and 1,155 full time equivalents in 2022), 749 (752) women and 404 (408) men. The proportion of women is 65 per cent, the same as last year.

Docents

KTH admitted 30 (31) docents in 2024, 14 (9) women and 16 (22) men. The proportion of women among those admitted was thus 47 (31) per cent. Admission as a docent is part of an academic career in which teachers and researchers can build up their own research groups through principal supervision of doctoral students. Anyone who has been admitted as a docent is expected to be the principal supervisor of doctoral students, act as an external reviewer and participate in examining committees for public defence of doctoral theses in the subject area, contribute to teaching in the subject area at second and third-cycle level, and conduct research activities at an international level.

Premises

At the end of 2024, KTH had approximately 282,500 m² (281,800 m²) of premises at its disposal. Accommodation for students and visiting researchers is not included in this area. Just over 33,300 sq m (31,800 sq m) are sublet to parties such as the Swedish Red Cross University College, Stockholm University, the Karolinska Institute, Södertälje Science Park, the Swedish National Defence College and Stockholms Idrottsgymnasium AB. In 2023 and 2024, KTH took strong action to reduce the increased costs of premises in recent years by reducing the long-term property portfolio.

The University Board made a decision in November 2023 to relocate operations at two of KTH's campuses. This decision means that KTH's current operations in Södertälje will be relocated to KTH Campus and KTH Flemingsberg. KTH's current operations in Kista, with the exception of the Electrum Laboratory, will be relocated to KTH Campus. The aim of this decision is to strengthen the existing education and research environments by means of increased coordination and to reduce KTH's premises costs in the long term. In early 2024, the President decided on a programme directive for the relocation, which formed the basis for the planning and implementation of relocations. The number of students on KTH Campus will increase by around 2,000 after the move. The Electrum Laboratory in Kista is making an investment in research and education in semiconductor technology. KTH is examining the feasibility of appointing a new accountable authority for the Electrum Laboratory.

In 2024, minor refurbishments were carried out that were mission-critical or improved the utilisation of premises. A number of maintenance works and energy saving measures were carried out by Akademiska Hus on KTH Campus. A major overhaul and maintenance of existing fume cupboards was carried out in the chemistry blocks.

Educational environments across KTH Campus were renovated and upgraded, which involved implementing new technologies and improvements for KTH students. New technology and teaching desks have been installed in the learning environments at Malvinas väg 10 and Teknikringen 72–76. Study environments have been expanded and improved at the KTH Library and Malvinas väg 10.

Accommodation for students and visiting researchers

In 2024, KTH provided accommodation for 1,665 international Master's students and 407 exchange students.

Significantly more two-year Master's students required to pay tuition fees started at KTH For the 2024/2025 academic year compared to the previous academic year. The number of students with guaranteed accommodation increased by 21 per cent as a result of the introduction of guaranteed accommodation for students required to pay tuition fees. This means that fewer exchange students could be offered accommodation in the autumn of 2024.

The rental stock comprises a total of 880 homes with a total of 1,130 places divided into studio apartments, corridor rooms and shared apartments. The occupancy rate was 89 per cent over the whole year.

KTH also arranges accommodation for foreign doctoral students and visiting researchers. During the first six months of the year, the total portfolio included 280 homes in Greater Stockholm that were intended for the target group. The contract for a building in Hjulsta was cancelled in the third quarter, thereby reducing the portfolio to just over 250 homes for the target group. The occupancy rate over the year was 98 per cent.

About 530 foreign guest researchers and doctoral students received accommodation through KTH in 2024. Housing demand remains high for 2025. KTH is of the opinion that its accommodation portfolio covers the housing needs of doctoral students and visiting researchers.

The loss on rental of accommodation amounted to SEK 6.1 million. Details on income and expenditure can be found in Note 2 to the income statement.

The forecast for fee revenues for rental of accommodation in 2025 is SEK 112 million, while costs are estimated at SEK 114 million. This results in a projected deficit of SEK 2 million for 2025. The number of places is expected to decrease by around 100 as a result of changes already made to the rental stock. The occupancy rate is projected to increase slightly compared to 2024.

Financial summary

Finance – earnings, use of resources and funding

Earnings and change in capital

The financial performance for KTH in 2024 amounted to SEK -105 (-258) million, which means that KTH's performance 2024 is SEK 153 million better than the performance in 2023. Revenue for 2024 increased by 9.4 per cent or SEK 518 million compared to 2023, while costs increased by 6.3 per cent, corresponding to SEK 365 million. The operational outcome for 2024 was forecast at SEK -160 million in the budget documentation, and the difference from the final outcome amounts to SEK 55 million. The difference can be explained by the fact that revenue was significantly higher than forecast. Costs were also higher than expected, but not to the same extent as revenues. KTH utilised more than expected of the accumulated direct government funding savings that existed within KTH's direct government funding for first and second-cycle education, which also had a positive impact on revenue.

Education at first and second-cycle level generated a surplus of SEK 4 million in 2024 compared to a deficit of SEK 137 million in 2023, an improvement of over SEK 141 million. The deficit within research and education at third-cycle level amounted to SEK 109 million in 2024, compared with a deficit of SEK 121 million in 2023, representing an improvement of SEK 12 million.

The improved performance in 2024 compared to 2023 shows that KTH's efforts to balance its books had an effect, particularly with regard to education.

KTH's turnover increased by SEK 517 million compared to 2023 and amounted to SEK 6,884 (6,367) million, calculated as operating revenue including funds for funding transfers. As these transfers remained at the same level as in 2023, the entire increase is attributed to the increase in revenue. KTH's turnover has increased by 44 per cent in ten years, with operating revenue increasing by 38 per cent and transfers by 103 per cent. The involvement in SciLifeLab, where KTH is the host university, generated revenue in the form of direct government funding, grants and fees, which totalled SEK 272 (257) million in 2024. This revenue represents just under 5 per cent of KTH's total revenues. Further information on SciLifeLab's activities and funding can be found in the section entitled *Research*, and also in the separate annual report on SciLifeLab submitted by KTH to the government in connection with the annual report.

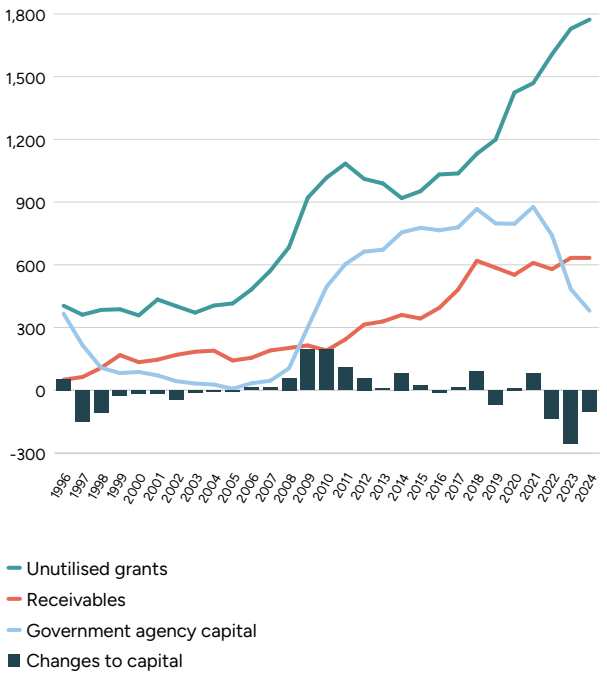
KTH's agency's capital amounted to SEK 380 (484) million at the end of 2024, corresponding to 6 (8) per cent of turnover according to the above definition and 6 (9) per cent of operating revenue. Of KTH's total agency's capital, SEK 166 (196) million relates to SciLifeLab. This amount includes both agency's capital in respect of direct government funding not yet allocated and previously allocated direct government funding for KTH's activities that has not yet been utilised.

Figure 18. Surplus/deficit
MSEK

	2024	2023
Revenues	6,001	5,484
Costs	6,106	5,742
Profit/loss	**-105**	**-258**
Revenues for transfers	882	883
Grant issued (costs for transfers)	-882	-883
Profit/loss	**-105**	**-258**

Source: Financial system.

Figure 19. Earnings and Capital Trend
MSEK



Source: Financial system.

Figure 20. Capital development
MSEK

	Balance carried 2024	Profit/ loss 2024	Profit/ loss 2023	Balance brought 2023
First and second level studies	-276	5	-136	-145
Purchased courses	4	-1	0	5
Commissioned courses	-1	0	-1	0
Research and doctoral studies	640	-112	-114	864
Commissioned research	14	3	-7	18
Total	**380**	**-105**	**-258**	**741**

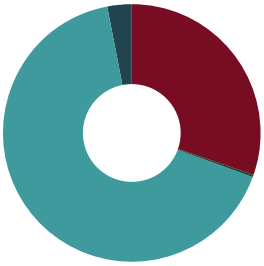
Source: Financial system.

Revenue

Total revenue increased by SEK 518 million in 2024 and amounted to SEK 6,001 (5,484) million. All types of income, except for financial income, contributed to the increase. Direct government funding increased by SEK 203 million, of which price and salary adjustments totalled SEK 112 million. KTH also received funds for certain education and research initiatives. In 2024, KTH also utilised some of its direct government funding savings in education, which resulted in increased revenue. Research grant income increased by SEK 214 million, corresponding to an increase of 11 per cent compared to 2023. The EU and the Wallenberg Foundations accounted for the largest increases of SEK 88 million and SEK 51 million respectively. Income from fees and other remuneration also increased to SEK 844 million, representing an increase of SEK 105 million or 14 per cent compared with 2023. Financial income decreased by SEK 4 million, which is mainly due to the interest rate cuts that took place during the year.

Figure 21. Field of activity

Total MSEK 6,001 (5,484)



In percent	2024	2023
First and second level studies	30,3	29,4
Purchased courses	0,1	0,2
Commissioned courses	0,4	0,3
Research and doctoral studies	66,2	67,2
Commissioned research	3,0	2,9

Source: Financial system.

Figure 22. Sources of income

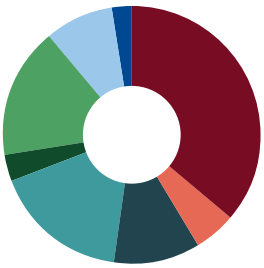
Total MSEK 6,001 (5,484)

In percent	2024	2023
Government grants for education first and second level studies	24,0	23,3
Government grants for research and doctoral studies	25,1	26,6
Research Council	7,6	8,4
Other government agencies	16,7	16,8
Strategic foundations	2,2	2,7
EU	6,4	5,4
Private / Other	18,0	16,8

Source: Financial system.

Figure 23. Research funding

Total income MSEK 4,153 (3,848)



In percent	2024	2023
Government grants for research and doctoral studies	36,3	38,0
Vinnova	5,1	4,8
Research councils	11,0	11,9
Other government agencies	17,0	17,3
Strategic foundations	3,2	3,9
Swedish companies and organisations	16,5	14,7
EU	8,6	7,0
Other foreign fundings	2,3	2,4

Source: Financial system.

Education at first and second-cycle level

Revenue for education at first and second-cycle level increased by SEK 213 million compared with 2023 and totalled SEK 1,849 million in 2024, representing 31 (30) per cent of total revenue.

Income from direct government funding in respect of first and second-cycle education amounted to SEK 1,438 (1,280) million in 2024, which is an increase of 12 per cent or SEK 158 million compared with 2023. This is mainly explained by a significant increase in the number of full time equivalent students and annual performance equivalents compared to 2023. Full time equivalent students increased by 1,066, while annual performance equivalents increased by 674. This is also partly explained by the increase in remuneration in the disciplinary domains of science, engineering and technology. KTH offset SEK 1,444 (1,291) million for 2024, which was SEK 60 million above the funding cap. There was already SEK 133 million in direct government funding savings, of which SEK 60 million was utilised for 2024. After 2024, therefore, there is SEK 73 million in direct government funding savings left to be utilised: see Note 1. During the year, a new resource allocation model was introduced at KTH for first and second-cycle education, whereby the organisation calculates full time equivalent students and annual performance equivalents internally.

Revenue from fees and other remuneration in education increased by 16 per cent, SEK 47 million, and amounted to SEK 342 million in 2024. This increase is mainly explained by higher income activities funded by tuition fees, where income amounted to SEK 187 (158) million in 2024. Revenue from tuition fees accounted for about 10 (10) per cent of total education revenue in 2024. There has also been an increase in revenue from the letting of premises.

Research grant income increased by SEK 10 million and totalled SEK 53 million in 2024. This increase is partly explained by higher revenue from the EU.

Revenue from contract education in 2024 amounted to just over SEK 21 million, representing an increase of 30 per cent, just under SEK 5 million, since the previous year. Revenue from contracted courses totalled just over SEK 7 million in 2024.

Research and education at third-cycle level

KTH's income for research and education at third-cycle level amounted to SEK 4,153 (3,848) million in 2024, which is an increase of 8 per cent or SEK 305 million compared to 2023. Income for research and education at third-cycle level accounts for 69 (70) per cent of KTH's total revenues.

Income from direct government funding for research and education at third-cycle level increased by SEK 45 million compared to 2023. Transfers of funds from the central government

budget increased by SEK 45 million in the field of research, which means that parts of the increased allocation have been passed on, mainly to other universities. Of direct government funding for research, SEK 463 (418) million has been used to fund transfers to other universities, primarily for SciLifeLab's activities and collaborations in strategic research domains. Hence this element of the direct government funding is recognised as transfers and not within operating revenue.

Research grant income amounted to SEK 2,105 (1,901) million, corresponding to an increase of SEK 204 million compared to 2023. In combination, the Wallenberg Foundations and the EU account for almost SEK 139 million (68 per cent) of the increased research grant income. External research grant income accounted for just over half of total revenue in the field of research and third-cycle education. KTH's three largest external funding bodies in research and third-cycle education are the same as in 2023. As before, the Swedish Research Council is KTH's largest funding body. Income from grants from the Swedish Research Council totalled SEK 378 (381) million. The second largest funding body was the EU with SEK 359 (271) million, followed by the Wallenberg Foundations with SEK 302 (252) million. These three external funding bodies account for just over 49 per cent of total research grant income within KTH's research activities. See the section entitled *Research*.

Revenue from fees and other remuneration increased by SEK 58 million to SEK 502 million in 2024.

Expenses

Operating expenses amounted to SEK 6,106 (5,742) million, which is an increase of just over 6 per cent compared with 2023. Staff costs increased by SEK 262 million or 7.5 per cent compared to 2023, amounting to SEK 3,765 million in 2024. This relatively large increase is due to factors such as the annual salary reviews and the increase in payroll expenses. Pension costs, which are part of payroll expenses, increased by 31 per cent compared with 2023, due in part to the increase in the pension disbursement age from 65 to 69. The number of full time equivalents increased in 2024, which also affected staff costs. Staff costs alone accounted for 72 per cent of the total cost increase in 2024. Premises costs increased by 5.4 per cent (SEK 59 million) in 2024, compared to 2023. This increase is mainly explained by the indexation of rental costs that takes place before each new year. Operating costs increased by SEK 23 million, corresponding to 2.6 per cent. Both consultancy and travel costs, which increased in previous years, were at the same level as in 2023. The relatively marginal increase in costs can be viewed partly in the light of the general price increase that took place during the year, and partly as part of KTH's efforts to balance its books. Depreciation costs increased by SEK 18 million or 7.2 per cent to SEK 270 million in 2024. This increase is in line with the investment KTH has made in aspects such as new and renewed infrastructure, which will also continue going forward. Financial expenses increased by just over SEK 2 million and totalled SEK 26 million.

Education at first and second-cycle level

Expenses for education at first and second-cycle level constituted 30 (31) per cent of the total operating expenses, amounting to SEK 1,844 million in 2024. These costs increased by 4 per cent, SEK 71 million, compared to 2023. This increase is explained by higher costs for staff and premises. Staff costs increased by SEK 67 million, corresponding to 6.5 per cent. Premises costs increased by SEK 18 million compared to 2023, due mainly to the annual indexation. Other operating expenses, on the other hand, fell by almost 6 per cent, SEK 15 million, compared to 2023. Depreciation costs remained relatively stable compared to 2023, increasing by SEK 2 million.

Research and education at third-cycle level

Costs for research and third-cycle education totalled SEK 4,262 (3,969) million, an increase of SEK 293 million compared with 2023. Research costs accounted for 70 (69) per cent of KTH's total costs. Staff costs increased by just under 8 per cent (SEK 196 million) in 2024. This increase in costs is due to the annual salary reviews, higher deductions for payroll expenses and an increased number of full time equivalents. Costs for premises increased by SEK 41 million and totalled SEK 705 million. This increase is explained mainly by the indexation of rents. Other operating expenses increased by just over SEK 38 million, corresponding to an increase of just over 6 per cent compared to 2023. In particular, costs for computer consultants and conferences increased. Depreciation costs increased by just over 8 per cent and amounted to SEK 208 million in 2024. KTH has made a number of decisions on infrastructure initiatives and applied for external funding for investments in equipment, etc., which has affected depreciation costs.

Relocation of operations

In November 2023, KTH's University Board made a policy decision to relocate operations from Kista and Södertälje. Planning has taken place in 2024 with regard to when different parts of the organisation are set to relocate. According to the plan, operations in Södertälje will be relocated by the autumn of 2025 and operations in Kista, except for the Electrum Laboratory, will be relocated by the autumn of 2026. The fi-

Figure 24. Costs

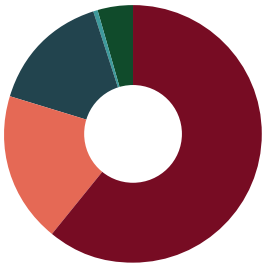
MSEK

	2024	2023
Staff	3,765	3,502
Premises	1,137	1,079
Other operating costs	908	885
Financial cost	26	24
Depreciation	270	252
Total	**6,106**	**5,742**

Source: Financial system.

Figure 25. Costs

Total MSEK 6,106 (5,742)



In percent

	2024	2023
Staff	61,7	61,0
Premises	18,6	18,8
Other operating costs	14,9	15,4
Financial cost	0,4	0,4
Depreciation	4,4	4,4

Source: Financial system.

Figure 26. Outcome for education at first and second cycle

MSEK

	2024	2023	2022
Operating revenues			
Government grants	1,438	1,280	1,243
Revenues from tuition fees and other charges	342	296	283
Revenues from grants	53	42	40
Financial income	16	18	5
Total operating revenues	**1,849**	**1,636**	**1,570**
Operating costs			
Staff costs	1,090	1,024	981
Costs for premises	433	415	356
Other operational costs	252	267	287
Financial costs	8	7	2
Depreciation	62	60	59
Total operating costs	**1,844**	**1,773**	**1,684**
Total operating outcome	**4**	**-137**	**-115**

Source: Financial system.

Figure 27. Outcome for research and education at third cycle

MSEK

	2024	2023	2022
Operating revenues			
Government grants	1,506	1,461	1,417
Revenues from tuition fees and other charges	502	444	421
Revenues from grants	2,105	1,901	1,858
Financial income	40	42	22
Total operating revenues	**4,153**	**3,848**	**3,719**
Operating costs			
Staff costs	2,674	2,479	2,377
Costs for premises	705	663	631
Other operational costs	656	618	565
Financial costs	19	16	9
Depreciation	208	192	159
Total operating costs	**4,262**	**3,969**	**3,741**
Total operating outcome	**-109**	**-121**	**-23**

Source: Financial system.

nancial impact is dependent on factors such as the length of the rental contracts, negotiations with landlords on potential early termination of contracts and opportunities for subletting. This means that KTH may incur rental costs for some premises even after the operations have been relocated. Relocation will also incur costs for certain adaptations of premises at KTH Campus.

KTH has not made any adaptations to the premises in Södertälje that would give rise to restoration costs. Wear and tear at the premises is regarded as normal, and so KTH has no reason to expect any restoration costs. KTH is also of the opinion that wear and tear at the premises in Kista is normal, although restoration costs may arise when laboratories are relocated.

Management of foundations

KTH currently manages 93 private foundations via related management.

The foundations have been formed via various donations to KTH. The oldest foundation originated in a gift dating back to 1874, which was donated to KTH's predecessor, Kongl. Teknologiska Institutet (the Royal Technical Institute). The purpose of the Hultqvist Foundation is to award scholarships to poor or less well-off and diligent students at the university who have earned them through diligence and good behaviour. The Samuel Owen Scholarship Foundation also has the purpose of awarding scholarships to students at KTH. Both foundations still award scholarships to students at KTH.

Stiftelsen B-A Vedins fond för innovation och information, the B-A Vedin Fund for Innovation and Information Foundation, was closed during the year.

Management for the purpose of the foundations

The charter sets out the purpose of each foundation.
The KTH-affiliated foundations distributed SEK 26 (25) million in 2024.

Of the 93 KTH-affiliated foundations, 41 provide scholarships to students at first and second-cycle level. Nearly SEK 11 million was distributed through 340 scholarships, of which almost SEK 6 million came from the Henrik Göransson's Sandviken Scholarship Fund, the largest of the foundations managed by KTH. This foundation has capital amounting to SEK 256 million.

Travel grants for teachers, researchers and doctoral students are awarded by 28 foundations. From these, nearly SEK 6 million was distributed through 218 grants in 2024.

The other 24 foundations contribute to research activities at KTH. A decision was made during the year to award grants for such activities totalling just over SEK 8 million over 80 scholarships.

The second largest foundation managed by KTH is the KTH Great Prize Foundation from a donation made in 1944. The donor stipulated that the prize should be awarded to a Swedish citizen who has been of major significance to Sweden through epoch-making discoveries, ingenious applications or artistic endeavours. Johan von Schreeb was awarded the KTH Great Prize in 2024. The statement issued by the KTH judges regarding the awarding of the prize to Johan von Schreeb says: "With unwavering competence and presence, he perceives people, risks, context, vulnerability and opportunities to help those somewhere in the world whose lives have been shattered. His efforts, on the ground, through coordination or as a researcher, alleviate suffering in wars and natural disasters. It also instils a belief in the humanity within us all. Johan von Schreeb is a very worthy recipient of the KTH Great Prize." This year's prize of SEK 1.5 million will be awarded in connection with KTH's professorial inauguration in April 2025.

KTH receives compensation from the foundations for the costs incurred in connection with their management. This remuneration for 2024 amounted to SEK 2.5 million.

Asset management

The capital of the affiliated foundations is managed on a discretionary basis by two external asset managers. This means that the asset managers are authorised to make reallocations in the portfolio, within the framework specified in the University Board's guidelines for the investment of capital for KTH's affiliated foundations.

Total foundation assets at the end of the year amounted to SEK 1,126 (1,040) million.

Figure 28. Size and number of foundations

Capital, MSEK at end of December 2024

	Number	Capital, MSEK
Foundations, 15–250 MSEK	18	806
Foundations, 5–15 MSEK	23	203
Foundations, 1–5 MSEK	45	112
Foundations, up to 1 MSEK	7	5
Total	**93**	**1,126**

Source: Bank statements of the foundations.

Financial statement

SEK thousand

	2024	2023	2022	2021	2020
Operating revenues					
Government grants	2,944,301	2,741,228	2,660,597	2,710,769	2,556,455
Revenues from tuition fees and other charges	844,404	739,783	703,808	678,842	674,633
Revenues from grants	2,157,361	1,942,865	1,898,095	1,923,698	1,840,929
Financial income	55,415	59,724	26,301	4,075	1,738
Total operating revenues	**6,001,481**	**5,483,600**	**5,288,801**	**5,317,385**	**5,073,756**
Operating costs					
Staff costs	3,764,571	3,502,420	3,357,468	3,325,956	3,173,160
Costs for premises	1,137,155	1,078,503	987,230	972,857	963,441
Other operational costs	907,927	884,842	852,007	724,670	704,745
Financial costs	26,304	23,859	10,549	2,963	834
Depreciation	270,286	252,057	218,718	211,212	220,945
Total operating costs	**6,106,243**	**5,741,681**	**5,425,973**	**5,237,658**	**5,063,126**
Total operating outcome	**-104,762**	**-258,081**	**-137,172**	**79,727**	**10,630**
Transfers					
Funds allocated from government budget for financing of grants	474,291	429,621	435,058	427,799	372,472
Funds allocated from government agencies for financing of grants	184,031	209,634	181,636	169,998	153,025
Other funds received for financing of grants	223,864	244,098	159,457	152,036	83,370
Grants made	-882,186	-883,353	-776,151	-749,833	-608,867
Outcome of transfers	**0**	**0**	**0**	**0**	**0**
Changes to capital for year	**-104,762**	**-258,081**	**-137,172**	**79,727**	**10,630**

Financial statement per operational area

		Education at first and second cycle			Research and education at third cycle	
	Total	First and second level studies	Purchased education	Commissioned education	Research and doctoral studies	Commissioned research
Operating revenues						
Government grants	2,944,301	1,437,945	0	0	1,506,356	0
Revenues from tuition fees and other charges	844,404	313,838	7,256	21,128	325,660	176,522
Revenues from grants	2,157,361	52,658	0	0	2,104,702	0
Financial income	55,415	15,653	0	36	39,078	647
Total operating revenues	**6,001,481**	**1,820,094**	**7,256**	**21,164**	**3,975,798**	**177,169**
Operating costs						
Staff costs	3,764,571	1,081,002	2,164	7,267	2,621,549	52,590
Costs for premises	1,137,155	430,487	802	1,231	690,511	14,124
Other operational costs	907,927	234,073	5,161	12,413	562,548	93,732
Financial costs	26,304	7,624	0	0	17,986	693
Depreciation	270,286	61,997	0	0	194,942	13,347
Total operating costs	**6,106,243**	**1,815,184**	**8,127**	**20,912**	**4,087,536**	**174,484**
Total operating outcome	**-104,762**	**4 911**	**-871**	**252**	**-111,739**	**2,685**
Transfers						
Funds allocated from government budget for financing of grants	474,291	11,395	0	0	462,897	0
Funds allocated from government agencies for financing of grants	184,031	23,402	0	0	160,628	0
Other funds received for financing of grants	223,864	4,240	0	0	219,624	0
Grants made	-882,186	-39,037	0	0	-843,149	0
Outcome of transfers	**0**	**0**	**0**	**0**	**0**	**0**
Changes to capital for year	**-104,762**	**4,911**	**-871**	**252**	**-111,739**	**2,685**

Balance sheet

SEK thousand

	2024-12-31	2023-12-31
ASSETS		
I. Intangible fixed assets	**55,189**	**38,973**
Capitalised expenditure for development	38	62
Intellectual rights and other intangible assets	55,151	38,910
II. Tangible fixed assets	**749,909**	**881,994**
Improvements to non-owned real estate	234,387	271,524
Machines, inventory items, installation etc.	470,718	564,770
Construction in progress	40,232	45,700
Advance payments for tangible fixed assets	4,572	0
III. Financial fixed assets	**31,014**	**30,014**
Interests in wholly and partially owned companies	30,925	29,925
Other investments held as fixed assets	90	90
VI. Receivables	**124,556**	**143,797**
Receivables – customers	32,466	31,200
Receivables – other government agencies	92,625	112,271
Other receivables	-535	325
VII. Cut-off items	**1,076,920**	**1,035,733**
Prepaid expenses	340,523	355,155
Accrued grant revenues	700,919	632,935
Other accrued revenues	35,477	47,643
VIII. Settlement with Government	**-73,059**	**-166,379**
Settlement with Government	-73,059	-166,379
X. Cash and cash equivalents	**1,751,853**	**1,829,735**
Balance and interest-bearing account at Swedish National Debt Office	1,523,531	1,616,382
Other credit balances at Swedish National Debt Office	228,323	213,353
Total assets	**3,716,382**	**3,793,867**
CAPITAL AND LIABILITIES		
I. Agency capital	**380,126**	**483,904**
Government Capital	32,347	31,363
Changes to capital brought forward	452,541	710,622
Changes to capital according to Financial Statement	-104,762	-258,081
III. Provisions	**63,573**	**51,092**
Provisions for pensions and similar commitments	16,992	10,378
Other provisions	46,581	40,713
IV. Liabilities etc.	**1,331,359**	**1,358,883**
Loans from Swedish National Debt Office	597,048	651,572
Accounts payable - other government agencies	151,026	118,567
Accounts payable - suppliers	171,067	225,696
Other accounts payable	412,601	363,435
Deposits	-383	-387
V. Cut-off items	**1,941,324**	**1,899,987**
Accrued expenses	104,746	104,722
Unutilised grants	1 773,163	1,729,217
Other prepaid revenues	63,415	66,048
Total capital and liabilities	**3,716,382**	**3,793,867**
CONTINGENT LIABILITIES		
Government guarantees for loan and credits	none	none
Other contingents liabilities	0	8,000