





SINCE 1477 THE FIRST UNIVERSITY IN SWEDEN







BE CURIOUS AND FASCINATED BY EVERYTHING



Welcome to Uppsala University!

Cover photo: The Grand Auditorium in the University Main Building.

Carolus Linnaeus, appointed professor at Uppsala University in 1741

FIRST-RATE EDUCATION AND WORLD-CLASS RESEARCH **KNOWLEDGEAND KNOWLEDGEAND CREATIVITY** – since 1477



EVA ÅKESSON, VICE-CHANCELLOR

FOUNDED IN 1477, Uppsala is Sweden's first university. As such we have a long history and rich traditions. But first and foremost we are a modern, broad and dynamic research university with a threefold clear mission to conduct first-class research, provide education of the highest quality and interact with society.

Our international standing is good. We are ranked among the top 100 universities in the world, and we are very keen to maintain the highest possible academic standards. At the same time, our ultimate goal is to contribute to changing the world for the better. To achieve this, it is important to cherish our academic freedom and our independence as an academic institution, but also to foster and develop active collaboration and interaction with society.

The University is characterized by internationalization, diversity, and breadth. Our research and education spans nine faculties within three broad domains – *Science and Technology, Medicine and Pharmacy,* and *Humanities and Social Sciences*.



Uppsala University - world-class research and first-rate education of global use to society, business and culture.

QUICK FACTS

• A full-scale university with nine faculties: Arts, Educational Sciences, Languages, Law, Medicine, Pharmacy, Science and Technology, Social Sciences, and Theology.

- 40,000 students
- 6,000 employees
- Turnover: SEK 6 billion

FIRST-RATE EDUCATION PREPARING students for future CHALLENGES



EACH YEAR UPPSALA UNIVERSITY attracts thousands of highly motivated students from Sweden and across the world. We have accepted the challenge of educating students for the future.

Our students acquire cutting-edge competence and breadth in subject matter. The nine faculties create the conditions for disciplinary depth, for interdisciplinary research, and for education with a wealth of potential.

Uppsala University has a comprehensive offering of courses at both undergraduate and master's levels. A growing range of master's degree programmes now span traditional disciplinary boundaries. A degree from Uppsala University is highly regarded in the job market.

Uppsala University students meet a learning environment where they are confronted with the very latest research findings in modern premises and advanced laboratories. At the same time they get to experience cultural settings that date back several hundred years and a colourful variety of student choirs, orchestras and student club activities.



Being a student at Uppsala is about considerably more than taking courses. The vibrant student life is seen, heard and noticed everywhere in the city, home to 40,000 students.

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QUICK FACTS

• Uppsala University offers some 70 undergraduate programmes, about 60 master's programmes, and over 2,000 single-subject courses.

• 23,000 full-time student equivalents; 18,000 at undergraduate level and 5.000 at master's level.

• The most sought-after programmes at Uppsala University are law, medicine and psychology.

• Every year some 5,000 bachelor's and master's degrees are conferred.

WORLD-CLASS RESEARCH IMPROVING THEWORLD

AT UPPSALA UNIVERSITY research is conducted to help us understand nature, human behaviour, culture and society. Cutting-edge research offers new perspectives on fundamental scientific questions and contributes to a sustainable environment, human health and the advancement of society.

Uppsala University has the prerequisites to meet today's and tomorrow's great societal challenges. The breadth of the research provides strength and opportunities. In a recent major research evaluation by external international peers, 90 areas of research at Uppsala University were classified as "world-leading" and another 150 as showing "internationally high quality".

Research at Uppsala is organized into three broad domains - Science and Technology, Medicine and Pharmacy, and Humanities and Social Sciences - each of them striving to combine disciplinary depth with broad, thematic and boundary-spanning research initiatives. A major Swedish undertaking is Science for Life Laboratory, creating a national infrastructure for molecular research. It is built up in close collaboration between Uppsala University and three leading universities in Stockholm.

Uppsala University builds broad strategic research centres and research programmes, often with a multidisciplinary approach, in fields such as:

- Advanced Computational Science
- Antibiotic Resistance
- Business History
- Cancer
- Caring Research
- Clinical Research
- Conflict Data
- Diabetes
- E-science
- Energy
- Epidemiology
- Evolution and Genomics
- Gender Studies
- Labour Studies
- Natural Disaster Studies
- Neurodiagnostics
- Parallel Programming
- Religion and Society
- RNA Research
- Russian Studies
- Science for Life Laboratory
- Stem Cells and Regenerative Medicine
- Sustainable Development

Conferment - the twice-annual ceremony for those who have completed their doctoral degrees. Around 300 doctorates are conferred each year. The first conferment ceremony at Uppsala University was held in 1600.



QUICK FACTS

- 4,500 scientific papers are published each year
- Some 700 full professors (25% women)
- 2,400 PhD students
- 70% of the University's turnover relates to research and PhD education.
- 50% of research is funded by external sources.



Energy for the future. At Uppsala University, research is underway into many new energy sources and solutions, such as solar cells, wind and wave power, flywheels, and nuclear power. Karin Stensjö at the Department of Chemistry is developing a clean fuel source for the future. Commonly called "blue-green algae", these living fuel machines can convert sun and water into stored energy through photosynthesis. The product can be used as fuel, but first the process needs to be optimized.



A FULL-SCALE UNIVERSITY

Science & TECHNOLOGY

IN THE DOMAIN OF SCIENCE AND TECHNOLOGY the University offers engineering programmes, undergraduate programmes and master's programmes across seven broad areas: Biology, Chemistry, Computer Science, Earth Sciences, Engineering Sciences, Mathematics and Physics. The overall focus in research lies on a sustainable environment and technological progress. Five research profiles have been identified: energy supply and renewable energy, functional materials, sustainable development, information and communication technologies, and life sciences. Unconventional paths are taken in the endeavour to advance our understanding of the universe and the composition of life's smallest units. Whether it comes to examining the environment of space or taking wireless sensor networks to the next level, Uppsala University research paves the way for outstanding discoveries every day.

Research in science and technology is organized in a broad spectrum of research programmes, including for example evolutionary biology, biochemistry, visual information and interaction, solid earth geology, signals and systems, analysis and applied mathematics, and high energy physics.



Our research in information and communication technology provides a platform and knowledgebase of great strategic importance for bordering areas. Research on integrated computer systems and wireless networks involves key technologies expected to be of great societal and economic importance.

Science for life. Our capabilities to explore the secrets of life have never been greater. The new Science for Life Laboratory in Uppsala and Stockholm has the technological resources to map human and animal genomes and to search for the origins of diseases. Masood Kamali-Moghaddam at Science for Life Laboratory works with sensitive biomarker methods. The technologies allow detection of extremely low levels of proteins and can be used to learn more about diseases such as Alzheimer's and cancers.



A FULL-SCALE UNIVERSITY

Medicine & PHARMACY

AN AGEING POPULATION, affluence diseases, resistance to antibiotics, needs for new and improved drugs and therapies, and dramatically rising healthcare costs are some of the major challenges society is facing. With the overall aim to help people survive and live their life to the fullest, research in Uppsala targets the alleviation, healing, and cure of diseases and the development of new drugs, within a dozen areas: Pharmaceutical Biosciences, Immunology, Genetics and Pathology, Medical Biochemistry and Microbiology, Medical Cell Biology, Medical Sciences, Medicinal Chemistry, Neuroscience, Pharmacy, Public Health and Caring Sciences, Radiology, Oncology and Radiation Sciences, Surgical Sciences, and Women's and Children's Health.

Some strong research areas are drug discovery and development, bacterial evolution, antibiotic resistance and microbial pathogenesis, ageing-related diseases, cancer, diabetes and genomics.

Within the domain of Medicine and Pharmacy the University offers professional degree programmes in medicine, care and health as well as undergraduate programmes and master's programmes in for example Biomedicine, Forensic Science, International Health, Infection Biology and Molecular Medicine.





From the point of view of healthcare and the business community it is of greatest importance to develop effective and safe pharmaceuticals. Uppsala University has Sweden's only faculty of pharmacy.

A new world. Uppsala University is deeply committed to global development. Examples of this are research on religion and social sciences, historical and economic development, and peace and conflict research. Stina Högbladh is research coordinator of the Uppsala Conflict Data Program (UCDP), with information about all the world's wars, conflicts and peace processes. The UCDP is one of the most accurate and well-used sources on global armed conflicts in the world.



A FULL-SCALE UNIVERSITY

Humanities & SOCIAL SCIENCES

SCHOLARSHIP in the humanities and social sciences aims at understanding how people's conceptions and knowledge are formed in time and space, and the economic, political, social, and cultural aspects of human behaviour and the development of society. The research explains the causes and consequences of human interaction and societal organization. The University offers almost 50 undergraduate and master's programmes in arts, social sciences, law, languages, theology and educational sciences and 20 international master's programmes in for example religion in peace and conflict, political science, international law, language

technology and global environmental history.

The Humanities and Social Sciences domain includes a wide range of subjects such as Archaeology, Anthropology, Ethnology, Game Design, History, Literature, Musicology, Philosophy, Educational Sciences, Languages, Law, Business Studies, Economics, Food, Nutrition and Dietetics, Government, Informatics and Media, Peace and Conflict Research, Psychology, Social and Economic Geography, Sociology, Statistics and Theology.

Some focus areas are Peace, Conflict and Democracy, Growth and Welfare, Russian Studies, Natural Disaster Studies, Behavioural Science, Labour Market, Languages, Learning and Sustainable Development.



Skytteanum. The building is named after Johan Skytte, who established the Skytte chair in Eloquence and Political Science in 1622. Today, Skytteanum is the residence of the current professor, and premises for research and teaching in political science.

University and industry. Uppsala University strives to develop collaborations with the business community, both locally and globally. Ulf Landegren and his research group at the Department of Immunology, Genetics and Pathology have developed a number of new techniques for identifying and measuring biomolecules. Several of the methods have been licensed to international biotech companies, while others are being explored by companies spun out from the research group at the Rudbeck Laboratory.



INNOVATION & OUTREACH

Stimulating COLLABORATION

WAVE POWER, new materials, cancer vaccines, robots, smart windows, machine translation, 3D optics, PET technology, and micromotors are a few examples of activities and products that have grown out of the University's research, creating some one hundred new companies in the last ten years. Uppsala University is a key collaborative partner for business and society.

UU Innovation is Uppsala University's organization for supporting commercialization and collaboration with the business community. Uppsala University Holding is part owner of over forty companies in biotech, life sciences, materials science, space tech, ICT, renewable energy, social sciences and humanities. They submit more than 30 patent applications every year. Over 130 new student-based companies are created annually. UU Innovation deals with some 100 new commercial ideas from researchers and companies each year.

Uppsala University is part of a dynamic, expansive, and knowledgeintensive regional environment. The University Hospital, the Swedish University of Agricultural Sciences, the National Veterinary Institute, the National Food Agency, the Medical Products Agency, and the Geological Survey of Sweden are all self-evident collaborative partners for the University. The life science cluster in the Stockholm–Uppsala region includes five universities, hundreds of companies, university hospitals, and innovation support functions.



Profitable 3D effects. In five years, Rolling Optics has grown from degree project to a burgeoning company with 15 employees and suppliers around the world. Axel Lundvall is one of the researchers behind the unique 3D labels.

Building Worldwide NETWORKS





AT UPPSALA UNIVERSITY, international cooperation represents a means and strategy for improving the quality of research and study programmes.

Uppsala University collaborates with the best universities in the world. The flow of students, teachers and researchers between foreign universities and Uppsala University is essential in promoting knowledge, ideas and competence, not only within the University but also in society at large.

Uppsala University is a member of several different international networks and centres for academic collaboration around the world. Examples are:

- The U4 Network a strategic partnership between four European universities.
- The Matariki Network of Universities seven leading universities from Australia, New Zeeland, North America and Europe.
- The Coimbra Group comprised of 40 leading, multidisciplinary European universities.

ALUMNI NETWORK. A thriving Alumni Network enables 20,000 former students, researchers and employees to stay in touch with each other and with the University. The network has a number of local chapters spread out across the world, including in the US, Great Britain and China.



Uppsala University offers roughly 40 international master's programmes and nearly 800 single-subject courses taught in English.

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QUICK FACTS

• Uppsala University has agreements for student exchange with almost 400 foreign universities in 50 countries. • Approx. 2,000 incoming and 1,000 outgoing exchange students every year.

UPPSALA UNIVERSITY STRIVES TO CREATE OPTIMAL ENVIRONMENTS FOR INTERDISCIPLINARY COLLABORATION

SETTINGS

CAMPUSAREAS AT UPPSALA UNIVERSITY:

- One of Europe's largest centres for life science research. EKONOMIKUM – Research and education in business, economics and social sciences. EBC: EVOLUTIONARY BIOLOGY CENTRE – Research and education in biology. ENGLISH PARK CAMPUS, Centre for the Humanities – Campus for theology, humanities and social sciences. GAMLA TORGET CAMPUS – Research and education in law, political science, and peace and conflict research. GEO CENTRE - Research and education in earth sciences. ITC: INFORMATION TECHNOLOGY CENTRE – Research and education in computer science. RUDBECK LABORATORY – Research laboratory for immunology, cancer and genetic disorders. ÅNGSTRÖM LABORATORY – Uppsala's main campus for research and education in science and technology. UPPSALA UNIVERSITY - CAMPUS GOTLAND.



UPPSALA: SMALL TOWN AND GROWING CITY

Uppsala is Sweden's fourth largest city and one of its oldest. Ever since the Viking Age it has been an important cultural centre. Uppsala is a rapidly growing city and is becoming increasingly integrated with the wider Stockholm region, Sweden's most dynamic growth region. At the same time, Uppsala has kept many of its small-town characteristics. Offerings are myriad, but everything is close by - often within convenient cycling distance. The compact city centre with the Cathedral, the River Fyris, and several small squares, parks, cafés, restaurants, and historic buildings lend the city its character.

UPPSALA UNIVERSITY – CAMPUS GOTLAND

In the middle of the Baltic Sea, in the small medieval town of Visby, lies Uppsala University's newest campus – Campus Gotland. Gotland University College became a part of Uppsala University in 2013. Thereby Uppsala University gained access to a unique milieu in a smallscale setting. With a coherent interdisciplinary environment, Campus Gotland is to serve as a hothouse for new forms of learning activities. Perspective-rich and broad study programmes inspired by the Liberal Arts concept, web-based learning, and sustainable development are being designed here.



Research and learning are stimulated and promoted in the encounter between disparate perspectives at the various faculties. Creative meeting places have been developed at several campus areas with different specializations.

BLÅSENHUS – Research and education in educational sciences and psychology. BMC: UPPSALA BIOMEDICAL CENTRE

our mission is also to develop and steward our cultural heritage HERITAGE Keeping the HERITAGE ALICE



Uppsala is a town rich in historical cultural settings and many of them relate to Uppsala University. The University Main Building was built in the 1880s. **OUR COLLECTIONS** of art and science history are unique, our choirs and orchestras offer a wealth of musical entertainment and our range of museums is extensive. The cultural offerings at Uppsala University are an important resource to research and education, to visitors and to the people of Uppsala.



MUSEUMS. Dinosaurs, old books, beautiful art and historic artefacts. The large scientific, artistic and cultural collections have been tended in Uppsala since the Middle Ages. Museum Gustavianum houses the Augsburg Art Cabinet, Viking age discoveries, mummies and more.



MUSIC. Orchestras, choirs, big bands, rock bands and concert bands. Uppsala boasts a rich musical scene. The University's Royal Academic Orchestra was founded in 1627 and is one of Europe's oldest orchestras. The student clubs have choirs and orchestras of all kinds.



GARDENS. The Botanical Gardens are home to thousands of plant species: plants from the Scandinavian mountains, dry deserts and drenched rainforests. The Linnaean Garden is a reconstruction of what Linnaeus's botanical garden looked like in the mid 18th century.



LIBRARY. Uppsala University Library is one of few libraries in Sweden offering valuable and rare collections. Here are prints from the 15th century, manuscripts from the centuries before book printing, and pictures, maps and handwritten musical scores from the Middle Ages onward.



ART. The University's art collections are among the largest in Sweden, containing about 7,000 objects – paintings, sculptures, engravings, drawings, tapestries, carpets, furniture and artisan handicraft. The University Coin Cabinet holds one of Sweden's greatest coin and medal collections.



HISTORY. The Swedish king Gustav II Adolf was given the Augsburg Art Cabinet by the councillors of Augsburg in 1632, during the Thirty Years' War. The Silver Bible, *Codex argenteus* – meaning "Silver book" – is Sweden's most precious book and one of the world's best-known manuscripts. It was written in Italy in the early 6th century.

Where YESTERDAY meets TOMORROW

TODAY'S ADVANCEMENTS IN RESEARCH AND EDUCATION BUILD ON TRADITIONS OF KNOWLEDGE WITH DEEP HISTORICAL ROOTS



Carolus Linnaeus, Anders Celsius, Olof Rudbeck and Erik Gustaf Geijer are some of the famous historical Uppsala figures. Eight Nobel prizes have also made Uppsala University known around the world.

EIGHT NOBEL LAUREATES — are strongly affiliated with Uppsala University. Most of these prizes have gone to scientists in the fields of physics and chemistry.



Allvar Gullstrand, Professor of Ophtalmiatrics (eye diseases), was awarded the Nobel Prize in Physiology and Medicine in 1911. He was both a theoretician and a practitioner, and among other things developed new instruments for eye examinations. The Austrian Robert Bárány received the Nobel Prize in Physiology and Medicine in 1914 for his studies of the sense of balance. In 1926 he was appointed Professor of Ear, Nose, and Throat Diseases at Uppsala University.



The Svedberg, Professor of Physical Chemistry, received the Nobel Prize in Chemistry in 1926. He constructed the first ultracentrifuge for determining the size and form of various macromolecules, a separation method that has been of immense value to biochemistry and molecular biology.





Manne Siegbahn, Professor of Physics, introduced modern nuclear physics to Sweden. He was awarded the Nobel Prize in Physics in 1924 for his contributions to X-ray spectroscopy. Arne Tiselius, Uppsala's first Professor of Biochemistry, was awarded the Nobel Prize in Chemistry in 1948. The method he devised, electro-

phoresis of protein, played a major role in establishing Uppsala as a leader in biochemical separation methods.



Dag Hammarskjöld, Secretary-General of the United Nations 1953–1961, studied economics at Uppsala University. He was awarded the Nobel Peace Prize in 1961.

Kai Siegbahn, Professor of Physics (son of Manne Siegbahn) received the Nobel Prize in Physics in 1981. His work in high-resolution electron spectroscopy provided an important analytical method for studying the effects of chemical binding.

HUMANITIES AND SOCIAL SCIENCES

Faculty of Arts ALM (Archives – Libraries – Museums) Archaeology and Ancient History Art History Cultural Anthropology and Ethnology Game Design History History of Science and Ideas Literature Musicology Philosophy

Faculty of Educational Sciences Education

Faculty of Languages English Linguistics and Philology Modern Languages Scandinavian Languages

Faculty of Law Law

Faculty of Social Sciences Business Studies Economic History Economics Food, Nutrition and Dietetics Government Housing and Urban Research Informatics and Media Peace and Conflict Research Psychology Social and Economic Geography Sociology Statistics

Faculty of Theology Theology

MEDICINE AND PHARMACY

Faculty of Medicine Immunology, Genetics and Pathology Medical Biochemistry and Microbiology Medical Cell Biology Medical Sciences Neuroscience Public Health and Caring Sciences Radiology, Oncology and Radiation Science Surgical Sciences Women's and Children's Health

Faculty of Pharmacy Medicinal Chemistry Pharmacy Pharmaceutical Biosciences

SCIENCE AND TECHNOLOGY

Faculty of Science and Technology

Biology: Biology Education Cell and Molecular Biology Ecology and Genetics Organismal Biology

Chemistry: Chemistry – BMC Chemistry – Ångström Laboratory

Earth Sciences: Earth Sciences

Mathematics and Computer Science: Information Technology Mathematics

Physics: Physics and Astronomy

Technology: Engineering Sciences **Production:** Uppsala University, June 2014. **Editor:** Anna Malmberg. **Design:** Torbjörn Gozzi. **Photos:** Mikael Wallerstedt, Torbjörn Gozzi, Staffan Claesson, David Naylor, Anna Malmberg, Katarina Grip Höök



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