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UNIVERSITET

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Mission and Core Values of the Faculty of Science and Technology

Supplement to Uppsala University:
Mission and Core Values
(UFV 2013/110)

Adopted by the Faculty Board on 08/09/2015

Foreword

In autumn 2014, Uppsala University adopted overall *Mission and Core Values* (UFV 2013/110). The disciplinary domains/faculties must formulate faculty specific goals and strategies as a supplement to these on the basis of the faculties' different circumstances and activities.

The Faculty of Science and Technology has chosen to restate below the University's *Mission and Core Values* in their entirety and where necessary to supplement this with goals and/or strategies specific to the faculty. This means that what applies to the faculty on an overall basis is contained in a single document. To clarify the differences, the University's texts are restated in grey text, while the faculty's additions are presented in text boxes.

The *Mission and Core Values* will be concretised with an action plan containing actions, responsibilities and time conditions which should be revised on a regular basis.

This is Uppsala University (from UU Mission and Core Values)

The mission of Uppsala University is to *gain and disseminate knowledge for the benefit of humankind and for a better world.*

Uppsala University is a *local, national and international meeting place for knowledge, culture and critical dialogue.* The internationally prominent position the University enjoys is strengthened by its continuing change and its ability to forge new paths. *New areas of knowledge arise in cross-disciplinary cooperation.*

Uppsala University is an *integrated educational and research environment* where academic staff participate in both education and research. The backbone of the University consists of educational and research excellence across a broad range of subjects, in which academic staff and students together create a unique learning and research environment.

Uppsala University is *open to the outside world.* Research is made accessible and is put to good use. Education satisfies the needs of the individual and of society for training and professional knowledge. Active collaboration with the surrounding world contributes both to the development of education and research, and to achieving *sustainable solutions to the challenges facing society.*

Uppsala University's many parts are held together by the *shared values* of academic integrity, belief in the central role of knowledge and education in society, and the importance of open, frank and critical discussion. Academic freedom requires academic staff to take responsibility for the content and quality of their research, and to work together with students to create education of the highest quality. Progress is made by constantly reformulating, testing and questioning ideas and scientific theories.

The *working environment and leadership within Uppsala University are characterised by openness, responsibility and trust,* which gives all staff and students the opportunity to influence the University's activities. The University's academic leadership is based on principles of collegiality and student influence. Collegial bodies are responsible for education and research as well as collaboration with business and society, and take the initiative to improve and renew them.

Uppsala University's activities are characterised by *equal opportunities.* Basic principles of gender equality and the equal value of all people are applied so that staff and students are supported and encouraged to develop their capability to the full.

Science and Technology

Technology, science and mathematics are of central importance in the development of society and are the foundation of society's investment in the University, which in return contributes new knowledge and educated individuals. Research freedom is important because it makes possible the unexpected that renews our world view or lays the foundation for the development of new technologies – major breakthroughs lead to major societal benefits over the long term.

Vision for the Faculty of Science and Technology

New knowledge – new applications – new competence

We will carry out research and education of the highest international quality in order to expand our knowledge and to fulfil humanity's current needs without jeopardising our environment or future generations' opportunities to fulfil their needs.

We will carry out basic and applied research intended to achieve constant improvement and lead to new breakthroughs.

The faculty's courses should be linked with outstanding research, be based on modern educational developments, encourage the students' personal development and take account of society's needs.

The faculty as a whole should be an attractive partner for collaborations with companies, organisations, society and other educational institutions both in Sweden and internationally.

Organisational culture

Academic freedom provides considerable space for the individual to develop and control their work. This freedom brings a responsibility to collaborate in a collegial spirit to achieve optimal results. Managers and leaders at different levels within the faculty are strong cultural role models. With the objective that words and actions should agree, the faculty emphasises the following approaches to all employees and students:

Decentralised decision making – The collegial way of controlling a knowledge-based organisation.

Confidence – in each other in our various roles.

Mutual acceptance of responsibility and helpfulness – both in line management and in collegial positions of responsibility.

Appreciation – taking pleasure from and in each other's efforts.

Equal opportunities – a quality issue.

Openness – regular and open communication for transparent and well-anchored decisions.

Overall objectives – added by the faculty

The faculty's objectives are the achievement of new knowledge, new applications, and new competence.

In collaboration with society, we will jointly further reinforce the activities of the Faculty of Science and Technology. Students, academic staff and researchers from all across the world will apply to come here. The faculty's students, staff and alumni should feel proud of being part of Uppsala University.

Overall strategies – added by the faculty

- The strategic work at departmental level should play a central role intended to ensure rapidity, quality and collegial anchoring in our activities.
- The faculty should regularly seek to identify prioritise areas and benefit from initiatives from different levels and groups.
- The faculty should regularly evaluate the structure of research programmes and the distribution of basic financing.
- The faculty should regularly evaluate the relationship between education and research and should evaluate priorities within education at degree and Master's level.
- The faculty should have a clear process for the identification and financing of infrastructure and other resources which are central to education and research.
- The faculty should strive to achieve clear and attractive career paths and give people equal opportunities for an academic career regardless of gender.
- The faculty should strive to achieve good communication and cooperation with students in all aspects of the faculty's work.
- The faculty should strive to ensure that the different activities' needs control the development of support functions so that research, education and collaboration are supported in the best possible way.
- The faculty should strive to achieve increased visibility of its education and research and should disseminate good examples and results internally and externally.
- The faculty should strive to achieve continued and increased collaboration with industry and other business contexts, both nationally and internationally within research and education.
- The faculty should aim to achieve participation in EU programmes and other international networks within research and education.
- The faculty should strive to stimulate curiosity, create a permissive and encouraging climate for creativity and innovation, and stimulate ideas and entrepreneurial spirit.

World-leading research (from UU Mission and Core Values)

Bold goals demand perseverance and the courage to venture along new paths. Uppsala University stands behind the search for knowledge in order to contribute to human knowledge and global development. Research should take on the major challenges facing society as well as purely scientific questions. The University in all its breadth provides unique opportunities for cross-disciplinary collaboration and new combinations. The ability to attract and to create good working conditions for skilled academic staff is the most important factor for the University's success in the international academic community.

The Faculty of Science and Technology recognises the importance of both basic and applied research – outstanding basic research leads to outstanding applications and vice versa.

The faculty should ensure a stable base with strong subject based research and engineering, with a combination of theoretical and empirical ways of working and approaches. This will contribute to providing the necessary skills for Sweden's future as an industrial and knowledge-based society and to resolving complex problems with technical relevance.

The faculty's doctoral students, researchers, academic staff and alumni should be attractive on an international employment market and should be able to compete for positions at other prestigious educational departments.

Objective

THE UNIVERSITY WILL STRENGTHEN ITS POSITION AS A LEADING INTERNATIONAL RESEARCH UNIVERSITY

Strategies

- The breadth and diversity of research will be maintained and developed.
- The allocation of research funding between and within scientific disciplines and faculties will be based on evaluations of quality and productivity.
- New and strategically important areas of research will be given special support for rapid establishment.
- The application of sound research practices and ethical research principles is an absolute prerequisite and will be secured through continual educational and informational efforts.
- Dynamic research environments with shared infrastructure will be fostered to support excellent research and facilitate innovative cooperation.
- Cross-disciplinary research cooperation within the University and with external partners will be supported and structural barriers to cooperation will be removed.
- All research will be thoroughly scrutinised in order to strengthen quality and add new aspects. Research results will be published via the most prominent channels in the respective subject areas.
- Research results will be made available in open access channels, wherever possible.
- Cooperation with national and international research funding agencies and organisations will be reinforced and academic staff will be encouraged to take on duties in such organisations.
- External research funding will be increased by giving organisational support for the design of broad and cross-disciplinary research initiatives.

Strategies – added by the faculty

- The faculty should encourage and support interdisciplinary research and strong connections between empirical and theoretical activities.

Objective

THE UNIVERSITY WILL ATTRACT THE MOST QUALIFIED ACADEMIC STAFF FROM ALL OVER THE WORLD

Strategies

- Recruitment by means of international competition will be facilitated by openly advertising vacancies in the relevant languages in addition to Swedish, and by operating carefully considered, quick and efficient appointment processes.
- Recruitment of young academic staff from all over the world will be facilitated by offering clear career paths and resources to aid establishment for those appointed.
- Staff skills in both research and education will be fostered by providing opportunities to arrange continuous periods for research between periods of teaching.
- Excellence in teaching and research will be rewarded and competence development will be encouraged.

First-class education (from UU Mission and Core Values)

Education at Uppsala University is characterised by its association with research and a progression between education levels. Students acquire up-to-date knowledge as well as the skills and capacity for independent and critical thinking. Highly qualified academic staff is responsible for the pedagogical quality of education and for ensuring that the education we offer is grounded in scientific and scholarly progress. Together, teachers and students take shared responsibility for creating learning environments characterised by active student participation and engagement. Education at the Master's level is distinguished by specialised, in-depth teaching and is strategically important in terms of increasing international recruitment of students and for recruitment of students to doctoral programmes.

Doctoral students are instrumental to the long-term development of universities as well as the public and private sectors. They make significant contributions to the University's research. The education offered in our doctoral programmes gives students the competence and skills to conduct research independently, enables a deep understanding of the subject area, fosters proficiency in disseminating knowledge and enables the learning of others.

The Faculty of Science and Technology is distinguished by systematic pedagogical development work. In addition to the individual responsibility of academic staff and students, we also build on cooperation between the departments' and faculty's pedagogical leaders and education organisations, such as the programme council and studies board. The development is carried out in a collegial basis and reinforced through activities within the Faculty of Science and Technology university education council (TUR) and the Centre for Discipline-Based Education Research in Mathematics, Engineering, Science and Technology (MINT). Collaboration and cooperation with the students and the faculty's student unions is of major significance for retaining and developing the quality of education within the faculty and is an important precondition for the pedagogical development work.

Objective

ALL EDUCATION WILL MAINTAIN THE HIGHEST NATIONAL AND INTERNATIONAL QUALITY AND ALL STUDENTS WILL BE GIVEN THE OPPORTUNITY TO ACQUIRE FIRST-CLASS KNOWLEDGE IN THEIR SUBJECT AREA AS WELL AS GENERAL ACADEMIC SKILLS

For the Faculty of Science and Technology, in clarification of this objective, the following also applies:

- GRADUATING ENGINEERING STUDENTS SHOULD BE CHARACTERISED BY A HIGH LEVEL OF ENGINEERING SKILLS AND PROFESSIONALISM
- A SCIENTIFIC APPROACH SHOULD BE EMPHASISED IN RELEVANT COURSES

Strategies

- Our range of courses and programmes will be continually renewed and developed to balance the availability of expertise in a particular subject, changes in the current state of knowledge, student demand, and the needs of society.
- The range of courses taught in English, internationally oriented courses and programmes with an international perspective will be developed, including at Bachelor's level.
- Teaching methods and examination formats will be based on subject specific educational research and developed in interaction between students and academic staff.

- A multi-faceted approach to learning will be established so that students acquire both generic and specific theoretical knowledge and practical skills.
- Students and academic staff take mutual responsibility for their own and others' learning.
- A diverse student body will be promoted.
- The pedagogical competence of academic staff will be continually developed and their scientifically based approach to teaching will be strengthened by means of continuing education and critical reflection.
- Pedagogical excellence, subject knowledge and experience of educational leadership and development work will be rewarded and given greater weight when recruiting and evaluating academic staff.
- Leadership at all levels provides the prerequisites to maintain and develop research-based knowledge in teaching and learning.
- Educational infrastructure and support functions will be developed to assist in the best possible way and to meet students' individual backgrounds.

Strategies – added by the faculty

- Teaching and learning which is student centred and which promotes student action will be encouraged.
- The relation of our courses to professional life will be given increased visibility.
- The faculty accepts increased responsibility for training academic staff within the science and technology subject areas in dialogue with other faculties.
- The division between the academic staff's teaching and research time should be balanced to ensure synergy effects between research and teaching.
- Cooperation with national and international pedagogical leaders at both department and programme level will be reinforced.

Objective

ALL STUDENTS WILL BE GIVEN THE OPPORTUNITY TO ACQUIRE CRITICAL THINKING SKILLS, A SCIENTIFIC APPROACH AND ATTITUDE, AND FUNDAMENTAL ETHICAL PRINCIPLES

Strategies

- The content of education and teaching will be renewed on a continuous basis so that it reflects current research results and methods, and also highlights global perspectives.
- Students' ability to formulate and solve problems, to argue, evaluate and disseminate knowledge, will be challenged in all educational offerings.
- Students and academic staff will take shared responsibility for ensuring that the ethical aspects of all educational offerings are illuminated.
- The experience of students and academic staff from different social and cultural environments and backgrounds will be actively used.
- International student exchange will be stimulated, likewise cooperation with other knowledge environments.

Strategies – added by the faculty

- Each education programme takes responsibility for providing a logical progression for the development of general knowledge and skills, for example within the areas of sustainable development, ethics and communication.

Objective

POSTGRADUATE EDUCATION WILL BE A WELL-KNOWN AND ATTRACTIVE CHOICE FOR THE MOST MOTIVATED AND QUALIFIED STUDENTS FROM ALL OVER THE WORLD, AND THE PROPORTION OF STUDENTS IN POSTGRADUATE EDUCATION WILL INCREASE

Strategies

- The postgraduate programmes offered will be characterised by an in-depth scientific approach and a close association with research. Students will be engaged by, and involved in, on-going research to the greatest degree possible.
- By conducting independent study, students will acquire in-depth insight into current research and development, as well as sound research ethics.
- Cooperation and exchanges with other knowledge environments, as well as the public, private and non-profit sectors, will be further developed.
- Information about the University's educational offerings will be developed and coordinated in order to reach strategic target groups, and the University will increase its visibility in national and international contexts.
- Student services and study and career guidance facilities will be developed and continually adapted to postgraduate students' needs.

Objective

DOCTORAL EDUCATION WILL MAINTAIN THE HIGHEST NATIONAL AND INTERNATIONAL QUALITY AND BE A WELL-KNOWN AND ATTRACTIVE CHOICE FOR THE MOST MOTIVATED AND QUALIFIED STUDENTS FROM ALL OVER THE WORLD

Strategies

- Doctoral students will experience an educational environment that offers qualified supervision, theoretical and methodological courses that strengthen the capability to conduct independent research, and vibrant academic discussion. Research ethics and sound research practice will be continuously stressed.
- Admission to doctoral education will be in open competition, designed to promote national and international recruitment.
- Doctoral students will be welcomed in a systematic way with information about the University, local working conditions, and the unique study environment in Uppsala.
- Doctoral students will be encouraged to participate in national and international academic meetings and to pursue part of their doctoral studies at other higher-education institutions.
- Doctoral students will be given theoretical knowledge and practical experience of teaching.
- Doctoral students will be offered the opportunity to develop general skills and create personal networks that prepare them for a career both within and outside academia.

Attaining excellence and benefiting society (from UU Mission and Core Values)

Uppsala University's endeavour to combine academic excellence with providing benefit to society will be grounded in integrity, collegiality, quality and openness. Freedom in education and research will be safeguarded by a collegial system of decision-making and clear leadership in all parts of the organisation.

Well-functioning workplaces are essential to enable the University to conduct world-leading research and provide first-class education. Uppsala University will be an inspiring environment in which every employee and student is able to develop personally, professionally and academically, where a diversity of experience and individual initiatives are nurtured. Cultural heritage, academic traditions and an active student life are important parts of our educational environment.

Education and research will be developed in open dialogue and multi-faceted cooperation with the wider community. Successful cooperation is based on trust in the University as an independent and impartial knowledge organisation and takes its point of departure in the University's academic integrity. Our staff will conduct and develop cooperation with professional support in the fields of innovation, communication and different forms of contact with society.

In the faculty, there is a long and mutually beneficial tradition of collaboration with society as a whole. This collaboration involves many contact interfaces between academia and other parts of society such as schools, industry, public authorities and various media. This area is central to increasing the visibility of ongoing research, education and collaboration within these areas and thereby constitutes a basis for the recruitment of students and academic staff.

Objective

A CONSTANT ENDEAVOUR TO ATTAIN THE HIGHEST NATIONAL AND INTERNATIONAL QUALITY STANDARDS WILL PERMEATE EVERYTHING WE DO

Strategies

- Quality and renewal will be promoted by means of forward-looking recruitment and competency development, and by supporting and rewarding good performance.
- Systematic quality assessment and development, with collegial reviews and international comparisons, will be pursued as an integral part of all our activities.
- The engagement of staff and students and the joint responsibility they take for quality development will be stimulated and facilitated.

Objective

THE COLLEGIALLY BASED ORGANISATION WILL BE WELL-ANCHORED IN THE ENTIRE UNIVERSITY AND ENGAGE ALL EMPLOYEES

Strategies

- Staff will be encouraged to use their professional competence not only for their own part of the organisation's activities but also for the University in general.
- Staff and students will be given incentives to undertake governance and management duties, to stand for elected office, and to increase their competence through education and training in cooperation and leadership.
- Active efforts will be made within the entire University to create and maintain good working conditions, competitive terms, a good work environment, and equality and equal opportunities for staff and students.
- Recruitment of researchers and teaching staff will be based on collegial assessment of qualifications by experts and appointment committees with scientific and pedagogical expertise in the subject concerned.

Objective

COLLABORATION WITH THE PRIVATE, PUBLIC AND NON-PROFIT SECTORS WILL ENGAGE ALL PARTS OF THE UNIVERSITY AND CONTRIBUTE BOTH TO SOCIETAL DEVELOPMENT AND TO THE UNIVERSITY'S VITALITY

Strategies

- Collaboration will be developed in partnership with external partners by formulating challenges and implementing joint projects and educational elements.
- The academic staff's work to convey ideas and research results from the entire University and to make them available for societal benefit and commercialisation will be strengthened.
- Collaboration will be a more highly valued part of the work of all academic staff.
- External contract assignments in research and education, especially in continuing professional training, will increase through initiatives at all levels within the University.
- The exchange of expertise between the University and society will be encouraged and help provide opportunities for the University's employees.
- The University's alumni will be engaged to a greater degree to contribute to the development of education, research and collaboration.
- Funds donated by individuals and organisations will increase through the development of fundraising activities for education, research and collaboration.
- Society's knowledge of, and access to, the University's educational and research offerings will increase through improved communication, and new activities and arenas for dialogue.
- The University's museums, collections and other parts of our cultural heritage will be made accessible in order to develop new forms of collaboration.

Strategies – added by the faculty

- The faculty will endeavour to ensure that its researchers collaborate with society as a whole in order to disseminate knowledge, create interest, spread a scientific approach and broaden the views of people outside the University.
- The faculty should be attentive to the needs society has for the expertise within the faculty in order to create long-term collaborations with industry and public authorities, schools and the general public.
- The faculty should further develop its relationships with alumni, honorary doctors and other people connected to the faculty.
- Together with other societal actors and educational institutions, the faculty should strive to ensure that people choose to take up university studies within technology and science regardless of their gender and from different social and cultural backgrounds.
- Activities related to sustainable development should be given increased visibility and opportunities for interaction with society as a whole.
- The faculty's web presence is deemed very important and should be continuously developed in terms of form and content.

Objective

SUPPORT FUNCTIONS AND INFRASTRUCTURE WILL MEET THE UNIVERSITY'S NEEDS AND EXTERNAL PREREQUISITES

Strategies

- Administrative working methods and systems will be developed with a focus on quality and on effective and user-friendly support.
- The University Library and other information resources will be developed in step with technical and other advances.
- University premises and the physical infrastructure will be developed and adapted to changing needs.
- Models for prioritising and funding large-scale infrastructure projects will be developed.
- The University's museums and collections will be developed to a greater degree as a resource for teaching and research.
- Support for collaboration and commercialisation will be developed so as to utilise research results to the benefit of society and to contribute to greater exchange of knowledge with external partners.