



Rapport 2008:38 R

# Centres of Excellence in Higher Education 2008



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**Centres of Excellence in Higher Education 2008**

Published by the Swedish National Agency for Higher Education 2008

Högskoleverkets rapportserie 2008:38 R

ISSN 1400-948X

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Graphic design: National Agency Information Department

Tryck: Högskoleverkets kontorsservice, Stockholm, november 2008

**Printed on environmentally-friendly paper**

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## Summary

In January 2008 universities and other institutions of higher education in Sweden were invited for the second time to apply to the Swedish National Agency for Higher Education for recognition as Centres of Excellence in Higher Education.

In total, four applications were submitted by four institutions. This was a reduction compared to 2007. In this report the applications, as well as the decline in numbers, have been analysed. Compared to the first year, quality aspects have been described in more detail and the applicants are aware of the level of excellence required for the award. Institutions now have greater understanding of what an application involves and the level of excellence demanded is also known in the sector. These factors have probably contributed to the decline in applications in the second year.

Following a preliminary assessment, three applications were chosen for more in-depth assessments and site visits. These were carried out by the same international Expert Panel as in the first year, but now augmented with a student. The panel's assessments were also aided by reviews undertaken by field experts in relevant academic fields. At the Swedish National Agency for Higher Education the project was coordinated by members of the staff of the Department of Quality Assurance.

In conformity with the Expert Panel's proposal, The National Agency has decided to award the MSc programme in Mechanical Engineering at Chalmers University of Technology and Umeå Institute of Design at Umeå University recognition as Centres of Excellence in Higher Education.

These units have demonstrated clearly and convincingly that they have achieved excellence and are able to maintain it. Their identification as centres of excellence in higher education has been guided by the Agency's quality aspects. After the first year the Expert Panel further developed these guideline aspects, which has facilitated applications and assessments. It is the National Agency's intention to continue working on what characterises excellence in higher education and thereby contribute to the circulation of good practice.



## The National Agency's Reflections

In January 2008 universities and other institutions of higher education in Sweden were invited for the second time to apply to the Swedish National Agency for Higher Education for recognition as Centres of Excellence in Higher Education.

In total, four applications were submitted by four institutions. The second round saw a considerable drop in the number of applications. This decline might be explained by several factors: The results of the first round showed that standards were set very high; the requirement of letters of support from the Vice-Chancellors clearly stating why the unit was nominated discouraged poorly-prepared applications; lack of time – the announcement for the second round was made in January and the deadline was in mid-April – also played a role.

It should perhaps be mentioned that a quality-based resource allocation system is currently under discussion in Sweden. The prospect of its implementation may have induced institutions to hold back in the anticipation that over the next few years, recognition of excellence will have consequences for funding.

Improvements in the instructions to applicants, the clearer definition of quality aspects plus the requirement of supporting letters from Vice-Chancellors have markedly improved the quality of the applications. This year, none of them were considered “unassessable”. However, further development of the instructions and guideline quality aspects is necessary. It cannot be stressed too strongly that institutions themselves have to prove their excellence in the application. Not only must they describe their success factors, but also analyse and systematically verify them. The purpose of the site visit is to weigh up the evidence presented in the application, not to explore omissions. Thus, an application which fails to convince due to lack of evidence will not be reviewed further.

Among the four applications submitted, three were selected for a second review including a site visit. During the site visits two applications were able to add weight to the evidence and convince the Expert Panel of their strong focus on teaching and student learning.

So that institutions may have more time to prepare, the call for applications in the third round will be made approximately two months earlier. To further support the institutions in the application process, the Agency will revise the instructions. The importance of analysing success factors and providing relevant indicators and results will be stressed. Moreover, the guideline quality aspects will be clarified by adding more exemplifying questions.

On a final note, the Agency would like to express its sincere appreciation to all the experts involved in the process. With their time and effort, they have

contributed to realising the aims of the award: To create incentives for educational units that already maintain a high standard of quality to seek further improvement and inspire others.

**THE INTERNATIONAL EXPERT  
PANEL'S REPORT**



# Missive

In 2008 four units submitted applications to the Swedish National Agency for Higher Education with the purpose of being recognised as centres of excellence in higher education. The International Review Panel was entrusted with the task of assessing these applications. The following experts were appointed by the Agency:

Marianne Stenius, Chair of the Panel, Professor and Rector of Hanken School of Economics, Finland.

Barbara Kehm, Professor of Higher Education Research at Kassel University and Managing Director of the International Centre for Higher Education Research.

Guy Neave, formerly Professor of Comparative Higher Education Policy Studies, Twente University, The Netherlands is currently Scientific Director at the Centro de Investigação de Políticas do Ensino Superior, Portugal. He is a Foreign Associate of the US National Academy of Education.

Paul Ramsden, Professor and Chief Executive of the Higher Education Academy (HEA), United Kingdom.

Christian Schneijderberg, Doctoral student and Secretary General of the National Union of Students of Switzerland.

The Panel would like to recommend to the University Chancellor that the following two units be honoured as Centres of Excellence in Higher Education 2008:

- The MSc programme in Mechanical Engineering, Chalmers University of Technology.
- The Umeå Institute of Design, Umeå University.

Statements which comment on the applications are presented below. First, however, the Expert Panel would like to comment briefly on the review process and on the notion of “excellence”.

It has been very important to the Expert Panel to require the same level of evidence of excellence as in the first round in 2007. The process of assessment was also similar to the process of that year. All applications, as well as the analyses by field experts, were presented to the International Expert Panel. In general, the applications were well written and on average more focused than last year. Based on the university’s application and the reports of the field experts, three applications were retained as possible candidates and site-visits were arranged. This year, only one of the applications was not considered for a second review. In this case, the Review Panel was not able to assess all the dimensions of the quality of the activity, as some crucial information was lacking. As the role of the site-visit is mainly to confirm the evidence of quality stated in the written application rather than to explore omissions in

the written application, the Panel considers it important for all higher education institutions in Sweden to reflect on and improve the way in which units present themselves in their applications so that the high standard of quality is demonstrated fully.

As shown in this year's applications – and confirmed throughout during the site-visits – devotion and commitment to teaching and learning within Sweden's institutions of higher education are strong indeed.

In the course of the review process, meetings were held by the Panel to discuss the applications and how the quality aspects proposed for the appraisal should be operationalised. As also seen last year, excellence takes different forms. Some units lean to the more traditional, others embrace the innovative. The evidence they presented suggested that a level of excellence had been achieved and could, moreover, be sustained.

The two units proposed for recognition have provided firm evidence of excellence. The way selection was made poses important issues related both to the process itself and the outcome of the process. Characteristic for the process is that no one is compelled to apply. The Review Panel is well aware that other programmes, departments or units, which may rightfully claim a similar level of excellence, have for some reason opted not to take part this year. It is, nevertheless, the firm belief of the Review Panel that for those that have participated this year, the process serves as a means for improvement of quality in the long run.

The opinions on all the applications are presented below. These summarise the main points rather than offer detailed explanations of why a particular applicant should – or should not – be recognised as a Centre of Excellence in Higher Education 2008.

On behalf of the International Review Panel,

Marianne Stenius  
Chair of the Panel

# Institutions Reviewed

## **Chalmers University of Technology, MSc programme in Mechanical Engineering**

The mechanical engineering programme at Chalmers University of Technology is a five-year programme divided into two cycles to fit into the Bologna structure. Students who have completed both cycles are also awarded the Swedish degree of “Civilingenjör”. After completing the first three years, students will receive a Bachelor of Science degree and then specialise by choosing one of 15 different Master’s programmes. Eight of these programmes are the direct responsibility of the mechanical engineering programme’s management team and thus figure in the application. Students apply either for the five year programme or directly for one of the two-year Master’s programmes.

Teaching in the first cycle is mostly conducted in Swedish. For the second cycle, the language of instruction is English. In some of the master level programmes as many as half of the students are recruited internationally and the average proportion of international students is thirty per cent.

Over the past ten years the programme has improved continuously. It has played a leading role in the development and implementation of the CDIO-model (conceive-design-implement-operate) which has now spread to several institutions in Sweden and abroad. Furthermore, Chalmers was amongst the first institutions in Sweden to adopt the Bologna model.

In total 28 teachers, 27 men and 1 woman, corresponding to 25,5 full-time equivalents, were involved in the programme during the spring semester of 2008. In the same year, 190 new students were enrolled in the programme.

Chalmers has developed a “buyer-supplier” organisation for its programmes in which the departments supply courses which are funded separately and independent of departmental finances. The matrix structure of the programme is persuasive. The Programme Head has overall responsibility. In addition, there is a programme management team consisting of a coordinator, a study counsellor, a study administrator and the coordinators of eight associated Master’s programmes. The team meets weekly and discusses matters of principal and policy.

The quality assurance system is elaborate. Each academic year starts with a meeting of all parties involved to discuss experiences from the previous year, carry out an assessment, define benchmarks and follow-up and provide feedback on course evaluations. Moreover, course delivery agreements are assessed and, if the need arises, revised. All courses are evaluated by students. Student representatives meet regularly with teachers to discuss content, study climate and possible problems. The evaluation results and minutes are published on the student website. The site visit confirmed the flexibility and responsiveness of programme management to student needs and criticism. The importance of

course evaluations is underpinned by the provision of a twenty per cent reduction in funding for those departments failing to carry them out.

Infrastructure and facilities seem highly developed with state of the art equipment, computer access and a large research library, laboratory and workshop.

The teachers and programme management are highly committed and there is a strong sense of ownership among those involved in the programme, irrespective of the department to which they belong. Teachers appear highly qualified and, on recruitment, are required to provide proof of their teaching skills. They are also encouraged to create teaching portfolios.

Close links exist between teaching and research, as nearly all the teaching staff are actively involved in high quality research. Research as well as practical and professional orientation is emphasised and the curriculum is constructed around the learning outcomes and competences. The link between goals and courses is expressed through the ITU model (introduce, teach, utilise). There are intensive links with industry, while at the same time it is stated that Chalmers has established Master's programmes only in areas of proven research strength.

The thoughtful manner in which teaching is approached is inspiring. Acquiring generic skills (team work, presentation, writing skills and communicative ability) is emphasised. Industrial experience is integrated through internships and project assignments assisted by a company-based supervisor. At present, the programme is seeking ways to ensure more feedback from external partners on individual student performance.

Most examinations are written, but continuous assessment is carried out in a variety of ways, such as lab reports, small-scale tests and home assignments. However, the impression is that alternative forms of assessment could be introduced earlier in regular courses, e.g. during the first cycle.

The teaching seems very strong and the student learning process is supported in an excellent way. Not only is great emphasis placed on the health and safety of students, but equal weight is placed on creating a conducive study environment. The programme management team supports students in their studies and choice of courses and the Programme Head maintains an open-door policy. Supplementary instruction is available to improve learning and study strategies. Student counselling seems to be working exceptionally well and there are active strategies for preventing drop-out.

Students are actively involved in decisions regarding the curriculum and learning environment and all students are encouraged to take part in the activities of the student union, the advisory board or other committees. It is noteworthy that the student union has established its own mentoring programme.

There is evidence that of the mechanical engineering programmes in Sweden, Chalmers is the largest and most popular, and has the highest average admission grade. As evidence in support of the programme's high quality, it

was pointed out that several students are offered posts in industry in other Scandinavian countries and some leave before taking their final exams. Students' master or diploma theses have won prizes.

Alumni follow-up reports are conducted regularly by the central administration and alumni are kept abreast of curriculum changes. Both the programme and the departments involved participate in benchmarking activities within the university, nationally and internationally. The programme has good standing at partner institutions but more could be done to encourage the students to spend a semester or two abroad. The programme has a good reputation: employers claim its graduates stand out from the rest. Their basic knowledge is equal to that of graduates of other programmes, but they supplement their understanding of the basics with a capacity to link theory and practice, making them immediately useful in the workplace. Those continuing to PhD studies are very well prepared. Whilst the application made no reference to the employability of Bachelor level graduates, the site visit confirmed that the programme clearly aims for transition to Master's degree studies.

The programme combines elements of the traditional and innovative in an effective way and demonstrates a high degree of excellence. Management, as well as teachers show the means and will to sustain excellence. As a team, they share high aspirations, a strong commitment to relevance for employment, and a clear vision of the kind of graduates they want to produce. Over time, the concepts of integration, a holistic view and system as well as process thinking have become established practice through a focus on project work, following the increasingly used CDIO model, and the combination of this approach with a university-wide organisational structure and systematic evaluation system.

Success factors are defined and analysed effectively; clear goals and a common vision are shared by those involved; the programme operates in a mode of continuous improvement; management and staff are able explicitly to identify areas for enhancement and to describe the steps being taken to achieve them; and the student voice is encouraged and taken seriously. Special efforts are made to ensure good teaching: all staff is required to be skilled teachers and teaching is valued equally with scientific achievement; excellence in teaching is linked to appointment, promotion, and appraisal. The leadership of the programme embodies an infectious enthusiasm which motivates the staff to provide the best possible learning experience for students. The research of the teachers is complemented by focused involvement from industry. Some of these factors can be found in other programmes but here their combination and consistent implementation appear unique.

Some challenges remain - gender balance amongst the faculty, the induction of international students and the teachers' command of English as the medium of instruction. There is evidence, however, of action being taken to address such concerns.

The application from Chalmers University of Technology, including site-visit, has provided evidence that the MSc Programme in Mechanical Engineering is a centre of sustained excellence in the quality of its teaching and learning.

### **The Royal Institute of Technology, Doctoral Programme in Fibre and Polymer Technology**

The Department of Fibre and Polymer Technology, one of three departments in the School of Chemical Sciences and Engineering at the Royal Institute of Technology has a long tradition of research teaching. This is based on subject fields, which in turn are aligned on the present department's research divisions: Biocomposites, Coating Technology, Fibre Technology, Paper Technology, Polymetric Materials, Polymer Technology and Wood and Pulp Technology.

At the School of Chemical Science and Engineering, management of all doctoral programmes is the responsibility of the Head of Graduate Studies, assisted by the Deputy Head and an administrator. Doctoral students are organised in a council with representatives on the board of the school.

The doctoral programme in fibre and polymer technology is taught by 22 teachers: eleven full, five associate and six assistant professors. The total teaching hours correspond to 12.5 fulltime equivalents. The number of active doctoral students is 49, of which 42 have doctoral studentships. Students with positions in industry are also present.

The executive structure is clearly described and seems appropriate. All graduate courses are continuously evaluated and the results used to improve future courses. However the application does not provide an overview of other quality assurance mechanisms.

The infrastructure seems good: it includes a library, a workplace for each doctoral student and a large range of advanced instruments and laboratories.

The application provides few details about the overall management and administration other than those procedures generally applicable to the Royal Institute of Technology. Teachers are very active nationally and internationally: two are editors-in-chief of scientific journals. The group is linked to or a part of a range of centres, institutions and international projects. Implicitly, this suggests that cutting-edge knowledge in the area is available and included in the teaching offered. That the Royal Institute of Technology has a system for pedagogical development, i.e. a specially designed course for thesis supervisors, is to be commended.

Within the department there seems to be close collaboration to integrate the knowledge and experience generated by the various laboratories and to cover a broad range of issues in the field. It remains unclear, however, how research and teaching are connected.

The participation of external lecturers and the close ties with external partners from research and industry are positive features. The procedure for the

final exam is clear, though little mention is made of teaching methods and the way courses are examined. Nor is it entirely clear how teachers monitor the progress of students. Annual follow-up does not appear sufficient. Specific courses that foster general skills, e.g. project planning and research methodology, do not figure on the course list. The application hints that these are offered, but whether they are compulsory is unclear.

Though the number of doctoral students seems to vary at different points in the application, it is evident that all benefit from a favourable teacher-student ratio. Nevertheless it is hard to judge how effective the relationship between supervisors and students is and what exactly is the degree of involvement of the research group in the overall process of research training. Using more advanced doctoral students as mentors is certainly beneficial.

The unit graduates large number of PhDs and Licentiates. The average period of study for a PhD is slightly over four years. It would have been helpful to have had further information about the level of the thesis and its outcome, e.g. where articles are published, impact factors etc. A positive feature is that students have obtained several awards as “outstanding young European scientists forming the future European network”.

This is a network of teachers and researchers which constitutes a success factor from which students can benefit. It would have been useful to have had some indication to allow comparison to be drawn with similar institutions nationally and internationally.

The department certainly profits from the environment of the Royal Institute of Technology, and shows its own strengths in the doctoral programme it supports. Many teachers are excellent scientists, especially in applied research.

Nevertheless, the application remains very general, omitting details on several important issues: how many applicants for each PhD scholarships at the Royal Institute of Technology come from other Swedish universities? How many from OECD countries? How is the selection process carried out? What are the criteria for acceptance? Which doctoral courses are offered? Last but not least, what evidence is there of excellence in student achievement?

Pedagogy appears to be traditional, but there is insufficient detail on which a judgement may be reached. In particular, a description of the methods that ensure effective learning and appropriate examination would have been desirable.

The doctoral programmes in fibre and polymer technology at the Royal Institute of Technology benefit from a good environment, but the application does not present convincing evidence of its excellence.

## **Linköping University, Forum Scientium**

Forum Scientium is a doctoral programme in the natural sciences, engineering and biomedicine which started in 1996. It focuses on the professional career oriented aspects of PhD studies with special emphasis on careers in industry.

Two faculties, the Faculty of Health Sciences and the Institute of Technology are involved in the programme. Students are registered and like the supervisors and teachers employed at one of the departments in the two faculties. The programme is managed by a group directly under the Vice-Chancellor of the university, the deans of the faculties and the supervisors. The management group includes four members: the programme director/director of studies, the chairperson and the deputy chairperson from the Scientific Advisory Council and an administrator. The group is employed by a host department, the Department of Physics, Chemistry and Biology, which also administers all financial matters. The Scientific Advisory Council is made up primarily of teachers and students. One of its functions is to act as discussion partner for the student council and the management group.

The present number of doctoral students is 70. Approximately 60 per cent come from the Institute of Technology and 40 per cent from the Faculty of Health Sciences. In total 22 teachers are involved in the programme but their input corresponds to no more than 5.9 fulltime equivalents.

The organisational structure is not over elaborate and seems to function reasonably well. The management group, the scientific advisory council, the student council and an alumni network are all involved. The Expert Panel has, however some doubts about the programme's evolution from a relatively homogeneous graduate school to something more akin to a network. One pointer to this evolution is student funding. Initially a large proportion of the salaries for doctoral studentships was funded by the programme. Now individual departments and individual supervisors bear this responsibility. Another example is to be seen in the admission process, which lacks clarity. Once based on a common procedure, it is now more individual-based. Supervisors are responsible for the recruitment. If a student fits into the Forum environment, he or she will be accepted into the programme.

Quality assurance involves evaluation at different stages of the programme and altogether works well. The infrastructure consists of state of the art laboratories and a number of highly renowned research groups. Research focuses on industrial and medical applications. The management group is highly experienced and the expertise of teachers beyond question. There is, though, no visible evidence of a shared educational approach.

A strong applied-research orientation has unfolded at the interstices between physics, chemistry and biology. This is a great asset. The unit has a proven and successful track record and appears committed to working together to create and develop interdisciplinary research projects. Students are actively involved in research from early on, which is also an evident strength.

A broad range of seminars, meetings, study visits and summer schools are on offer. There are no obligatory core courses for the students in the programme: instead each student has an individual study plan. The specific courses offered in the programme entail more complementary subjects, project management,

patent processing etc. The possibility of being trained in complementary skills is, similarly, a positive advantage.

The twinning concept, which brings together doctoral students and research groups from different backgrounds to work together on a common project, provides appropriate tools to underpin interdisciplinary work. Nevertheless, a systematic approach to methodological issues appears to be lacking. There is no clear evidence related to examination methods. The teaching methods displayed are rather traditional. The staff/student ratio is good. Personal contacts between the teachers and the students seem to work well. Regular follow-ups and progress reports are included and the doctoral thesis is examined by an external opponent. The system for funding conference participation and other study visits is original and noteworthy indeed. Under this provision each student receives an additional lump sum each year which can be used to finance such activities.

The student completion rate is very good: 93 per cent of the doctoral students admitted finish either with a PhD or a licentiate degree. The students awarded PhD's receive them within the stipulated period of four years.

The programme's goal that its training should prepare for a career in industry or elsewhere outside academia is explicitly and effectively fulfilled: 2.5 years after graduation over 60 per cent of its graduates are employed outside the university sector.

The programme is truly innovative in certain dimensions and a number of relevant success factors figured in the application, all relevant. Comparison with the aims and achievements of similar institutions elsewhere in Sweden or abroad would, however, have been helpful.

The management group and not least the programme director have been instrumental in forging the positive effects of the programme. But a clear vision and strategy from the university as a whole does not appear evident. This, combined with unstable funding makes the future for the Forum Scientium rather challenging. At present, the programme is very much student driven. The students recognise its benefits, e.g. the twinning system and the complementary activities of the programme. Their wish to be part of the school makes it a going concern. To be a Centre of Excellence in Higher Education requires, however, excellence across different domains. In summary, the Expert Panel sees the Forum Scientium as more akin to a network without a shared curriculum than to a doctoral school, facilitating the learning of students, through cross disciplinary projects as well as industry-academic cooperation. On balance, the Forum Scientium appears not yet to meet all of the requirements of a Centre of Excellence.

## **Umeå University, Umeå Institute of Design**

The Umeå Institute of Design is a department within the Faculty of Science and Technology. It was founded in 1989. The core education at the Institute

includes a three-year Bachelor's programme in Industrial Design and three specialised two-year Master's programmes in Advanced Product Design, Interaction Design and Transportation Design. In addition a one-year specialisation course at postgraduate level in Advanced Design Visualisation is offered as well as an introductory course in Industrial Design, together with other shorter single-subject courses, for students with a study background other than in the design field.

The educational component has an artistic basis and focuses on the planning and design of industrial-made products, systems and services.

In all 16 permanent and 38 guest teachers are involved in the programmes. Among the permanent teachers there are three professors and one associate professor. Most of guest teachers have a Bachelor's or Master's degree and are experienced industrial designers active outside academia.

The number of students registered during 2007 was 118, 47 per cent of them at Bachelor's level and 53 per cent at Master's level. In the same year, 12 students were awarded Bachelor's degrees and 39 Master's degrees.

Responsibility for the institute is shared between the "Principal" and the Head of Department, and this works effectively. Together with the separate academic leadership of the four programmes it appears to be a dynamic system with shared workloads and delegation.

The quality assurance system seems solid and well adapted to the organisation and allocation of responsibilities. For instance routines are in place to introduce external teachers to the institute's pedagogical principles. Students are engaged in the development of the teaching and learning as well as in the quality assurance process. Both infrastructure and facilities are highly rated by students.

The design competence of the management team and the teaching staff is internationally recognised. The system of employing guest teachers and external professionals as project supervisors provides up to date competence to which students have access at any given moment and which is directly relevant to their specific learning level.

At Umeå University a twenty-week course in pedagogy is mandatory for all teachers. Although direct incentives like teaching awards seem to be lacking, evidence was provided during the site visit that teachers experiment with innovative teaching methods and enjoy fostering creativity in their students.

Management and permanent teaching staff have jointly worked out innovative solutions to provide external teachers who come from industry and have no experience of academic teaching with both the facilities and opportunities to develop and consolidate both teaching and didactic skills.

The application sets out clearly the goals of the programmes including concrete and operational statement of what is to be achieved. This is underpinned with activities and procedures of how to achieve it. The educational component is grounded in tried and tested experience based on cooperation with industry

and consulting companies. The programmes are strong in balancing academic research and an artistic foundation with pragmatic professionalism.

The educational goals are strongly directed towards professional employability for industrial design in the international labour market. Learning and content therefore focus on what is expected by the profession internationally. The possibilities for students to obtain international internships reinforce this aim.

The early introduction of an MSc programme in English during the mid-90s has resulted in a high degree of internationalisation in accordance with the visions and activities developed early on in the institute's history.

The teaching methods offer students a personal and unique learning experience built around close contact between students and teachers. Particular value lies in the strong focus on process thinking in student training. Student needs, wishes and ideas relevant to learning are considered on a daily basis. A high degree of awareness and organisational flexibility allows demands posed by a concrete project, as well as those of the individual student, to be met without delay. Adaptability goes hand in hand with a high degree of responsibility and trust in the student. Students are expected to be the driving force in their own tangible projects.

Examination and assessment are carried out in various modes during the learning process and seem to be appropriate both to the project and to the individual stage of learning the student has reached. Students present the results of their learning to each other, their teachers and supervisors as well as to industry. This procedure both encourages peer learning and raises the professional level of presentation skills. Rather than having them compete against each other, students are encouraged to work in teams and learn from each other. Tangible projects with international companies support ongoing benchmarking as does the commitment of international professionals to the supervision and assessment of learning outcomes, all of which ensure a high degree of professional relevance in the examination methods.

Staff and leadership of the institute are engaged in reflections on the teaching and learning process. They are aware of areas of improvement and confident enough to recognise and articulate them convincingly.

It is clear that the programmes have an excellent reputation and are very attractive to students both nationally and internationally. Highly motivated students are enrolled, and those applying for Master's programmes often come with prior professional experience.

The list of prizes won in international competitions is considerable. There is a convincing level of excellence. Such awards and prizes attest to a telling level of excellence attained. Furthermore the placement of 95 per cent of students as industrial designers strongly underlines the relevance and quality of the education provided.

The application offers a clear presentation of the goals of the programmes and the procedures through which they are attained. Management and staff

showed a high awareness of the key factors for reaching the institute's goals. The highly competent staff works jointly and continuously towards a common goal. This takes the form of a central educational concept grounded in a tangible project in cooperation with industry and supported by highly competent teachers from industry and from the Institute. In this, the Institute is constantly challenged to communicate to the external teachers the visions of the institute, its goals and its educational concept. No less attention is paid to work in small study groups, to low student-teacher ratios; to the generous access to facilities and equipment; to the active participation of students in quality assessment and in developing the education provided. Interaction with research, its results and their speedy assimilation into the learning environment are noteworthy. Last but not least, there is a good atmosphere among students and staff.

The application and the site visit to the Umeå Institute of Design provide clear and convincing evidence of excellence. The development of the programmes has been – and still is – supported by a well thought-out vision which is shared by staff and by administrators at Umeå University.

The Institute's vision and ideas have exerted considerable influence beyond it. The Institute's educational ideas have been adopted within the faculty of technology and natural sciences as well as in the Art School. Today, the institute is serving as a model for the new School of Architecture, currently under development at Umeå University.

Even so, the Institute's vision for the future poses considerable challenges, among them further consolidation of educational processes currently in place and the creative atmosphere, both of which will come under pressure from the rising numbers of students and external teachers/tutors. Among the further challenges faced by this vision are how to achieve a closer cooperation with Umeå University, for instance with the Art School and the new School of Architecture. Equally challenging will be how to bring about greater focus on research and on the enrolment of PhD candidates.

Management and faculty have identified the need to further integrate the Master's programmes and the communication between the programmes so as to obtain synergetic effects in learning outcomes and resources.

In view of what has been achieved thus far, with the same degree of support from the university and from external partners, the Expert Panel is convinced that the excellence shown today has a high probability of being sustained in the future.

# Appendix I: Swedish Centres of Excellent Quality in Higher Education 2008 – Quality Aspects as Guidelines for Evaluation

1. The teaching unit must have an organisational structure, a quality assurance system and an infrastructure that function exceptionally well.

- Are there effective systems for quality assurance?
- Can the organisational structure be considered as optimal?
- Can the division of labour be considered as optimal?
- Is the educational program/environment well supported by its context and networks, and vice versa?
- Is there supporting administration to guarantee continuity?

2. The teaching unit must be governed by a competent management, administration and by committed teachers with relevant knowledge, experiences and abilities.

- Are there systems for recognising and supporting excellent teaching and learning (including academic awards)?
- Are there systems for teachers' academic and pedagogical development?
- Are teachers participating in international activities and teacher exchange programmes?
- Are the basic indicators such as student/faculty ratio, number of teachers with PhD-degrees and number of professors involved in the education impressive?
- Is the teaching unit positioning it self compared to other environments in the same field?

3. The teaching unit must be firmly underpinned by an explicit and robust academic or artistic foundation or tried and tested experience.

- Are there explicit links between current research/development and student learning?
- How fast is research and new knowledge integrated in the curricula and in the teaching?
- Are students involved in research projects? If so, how is this organised and what are the results?

4. The teaching unit's methods of teaching and examination must be well adapted to the content and goals of the education.

- Are the goals well described and measurable?
- Are the methods of teaching and examination well described?

- Is it explained why or how methods of teaching and examination support reaching these goals?

**5. The students learning process must be promoted in an excellent way.**

- Are there procedures to secure and evaluate feedback from students?
- Are there indicators that show development of innovative and suitable pedagogical methods?
- Are degree projects and thesis externally evaluated?
- Is there a culture of learning how to maintain high quality?
- Are there indicators for a developed national and international benchmarking?
- Are there study support functions?

**6. The students must show excellent results.**

- Key performance indicators? (Number of applicants/available place? Throughput – do students take their exams within the scheduled time?)
- Are there alumni follow-up reports with regard to employability, transfer to doctoral programmes etc.?
- Are there other feedback mechanisms?
- Are they somehow able to measure “adding of value”?

**7. An outstanding teaching and learning unit must also be able to describe what factors have been important for success and why these factors lead to success.**

- How are factors of success defined?
- Is there an interest in sharing results with others?
- Has there been documented impact on other institutions? (Local, national or international?)

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BESLUT

2008-11-25  
Reg.nr 649-191-08

### **Beslut om Utmärkelsen framstående utbildningsmiljö 2008**

Högskoleverket beslutar att tilldela följande utbildningsmiljöer *Utmärkelsen framstående utbildningsmiljö 2008*:

- Civilingenjörsutbildning i maskinteknik, Chalmers tekniska högskola
- Designhögskolan, Umeå universitet

Ärendet har beslutats av stf. myndighetschefen Clas-Uno Frykholm efter föredragning av utredaren Magnus Johansson i närvaro av huvudsekreteraren Lena Adamson och kommunikationsstrateg Åsa Klevard. Beslutet grundar sig på bedömargruppens rapport.

Clas-Uno Frykholm

Magnus Johansson

Kopia  
Utbildningsdepartementet  
Rektorer  
Kontaktpersoner

