



LTH
FACULTY OF
ENGINEERING

GUIDELINES FOR APPOINTMENT
AS, AND PROMOTION TO,
PROFESSOR

Reg. No.
STYR 2017/22

Date 2017-08-17

**GUIDELINES FOR APPOINTMENT AS,
AND PROMOTION TO, PROFESSOR
AT LUND UNIVERSITY'S FACULTY OF
ENGINEERING – scientific basis**

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Introduction

Appointments of teaching staff at higher education institutions are regulated in the Higher Education Ordinance, HEO (SFS 2010:1064). Pursuant to HEO, Chapter 4, Section 3, a person is qualified for employment as a professor if he or she has demonstrated both research and teaching expertise. Each higher education institution determines itself what assessment criteria are otherwise to apply. In its appointment rules (STYR 2014/676), Lund University has established the qualification requirements and assessment criteria which are to apply to appointments as professor, promotion to professor and appointment as adjunct professor and visiting professor. Lund University's Faculty of Engineering (LTH) states in its decision on Guidelines for promotion to professor (STYR 2016/141) the sub-criteria which are to be met for promotion to professor at LTH.

The present document, Guidelines for appointment as, and promotion to, professor at the Faculty of Engineering, states how the qualification requirements and assessment criteria stated in Lund University Appointment Rules and the LTH decision on the Guidelines for promotion to professor are to be interpreted and applied at LTH. The criteria which are to be met are stated together with clarifying examples for the interpretation of the various criteria. Some of the sub-criteria state different levels for recruitment as compared to promotion.

Qualification requirements

Pursuant to Lund University Appointment Rules, the following qualification requirements apply to appointment as professor:

- proven research/artistic expertise
- proven teaching expertise and
- at least five weeks' completed training in teaching and learning in higher education or equivalent knowledge acquired by other means, unless there are valid reasons.

Pursuant to Lund University's appointment rules, completed training in teaching and learning in higher education is to relate to the national goals of the Association of Swedish Higher Education.

Assessment criteria

Pursuant to Lund University Appointment Rules, the following assessment criteria are to be met for appointment as professor. The assessment criteria specify what is to be taken into account and what level is to be reached, in order for the qualification requirements to be met.

1. Very good national and international standing as a researcher or artistic practitioner/researcher, where the requirement for international experience shall be assessed with consideration to the character and traditions of the subject.
2. A very high level of teaching skill, including a very good ability to conduct, develop and lead educational activities on different levels and using a variety of teaching methods.
3. A good ability to supervise doctoral students to achieve a PhD and/or students on arts programmes to achieve artistic independence.
4. A good ability to cooperate with wider society and communicate his or her activities.
5. A good general ability to lead and develop activities.

The concept of a very good ability is to be understood on the basis of the tradition and circumstances that apply in the relevant subject. With reference to the specialisation and content of an appointment, a person deemed to have exceptionally good teaching skills and good research/artistic expertise or vice versa, exceptionally good research/artistic expertise and good teaching skills, may be appointed as professor.

Sub-criteria

With the present guidelines, LTH has decided how the assessment criteria are to be interpreted and applied within the

faculty. For every assessment criterion there are sub-criteria which must be met for the assessment criterion to be deemed fulfilled. Examples that provide clarification for the different criteria have been included. Some of the criteria state different levels for recruitment as compared to promotion.

Personal suitability

Whether it be a promotion or a new appointment, the applicant must be suitable for the position. In case of a new appointment, the personal traits to be taken into account are to be stated in the relevant job specification, e.g. ability to cooperate, independence, structure, capacity for initiative, etc. In case of promotion, the assessment of personal suitability is to be included in the strategic consideration of the head of department.

Potential

Applicants are to demonstrate their future potential by describing in what way they intend to contribute to the development of the organisation.

Assessment criteria, sub-criteria and examples

LTH has decided that the following interpretation of the assessment criteria listed in the Lund University Appointment Rules is to apply in order for these criteria to be deemed fulfilled.

Assessment criterion 1

A very good national and international standing as a researcher or artistic practitioner/researcher. The requirement for international experience shall be assessed with consideration to the character and traditions of the subject.

Sub-criteria

- A. The applicant is a nationally leading and internationally recognised researcher. In case of promotion, the applicant is to have demonstrated a good ability to successfully apply for external funding.
- B. The applicant's research publications are of high quality and significant scope.
- C. The applicant is independent as a researcher.
- D. The applicant conducts documented relevant research of high quality.
- E. In case of promotion, the applicant is to have been appointed associate professor ("docent").

Examples

- A. The applicant's national and international standing as a researcher is assessed on the basis of the researcher's recognition in the research community. A very high degree of recognition can be proven e.g. by publications in renowned scientific journals of high quality, invitations as author of overview articles or as a speaker at major international conferences and/or participant in research committees at conferences. A very high degree of recognition can also be proven through peer-review assignments in renowned journals or significant conferences, membership in editorial boards, assignments as external reviewer at doctoral thesis defences, research awards and the ability to obtain renewed research grants from established research funding bodies in competition, where the applicant is the principal investigator.
- B. That the applicant's publications are of a high qualitative and quantitative level is assessed on the basis of e.g. articles published in established international scientific journals and/or at more significant conferences with a peer-review process, published books and book chapters and approved patents. The extent to which the works are cited by other researchers is taken into account. The applicant's position in the list of authors is significant in proving that their contribution was crucial to the production of the work. Appointment as professor requires

research production of at least twice the scope of that required for an associate professorship (“docent”).

- C. The assessment of the applicant’s scientific independence can be based on their proven ability to lead and develop an internationally recognised research field over the long term. This can be demonstrated, for example, through the applicant being the principal investigator for a current research grant equivalent to a grant from government research council, obtained in national or international competition, or having an eminent leadership role in large national or international research programmes. Another example of proven research independence is if the applicant has built up a research team over time in a distinct field of research.
- D. Current research activities are proven by current research projects with development potential and ongoing research funding.
- E. For employees with an associate professorship (“docent”) from another country, individual assessment is carried out.

Assessment criterion 2

A very high level of teaching skill, including a very good ability to conduct, develop and lead educational activities on different levels and using a variety of teaching methods.

Sub-criteria

- A. The applicant has undergone training in teaching and learning in higher education, at least five weeks’ worth for recruitment and at least ten weeks’ worth for promotion.
- B. The applicant has relevant subject knowledge and the ability to convert this knowledge into educational practice.
- C. The applicant shows a very good educational ability and has extensive teaching experience.
- D. The applicant shows the ability to lead and organise educational activities.
- E. The applicant shows a good ability for educational renewal and development.

- F. The applicant shows a reflective approach to teaching and learning.

To demonstrate teaching expertise entails being able to carry out the educational task in the best possible way. A carefully considered educational philosophy with clear goals is a key component in the assessment of teaching expertise. An essential component is the applicant's own educational reflection, i.e. their ability to critically analyse their own teaching practise. This highlights the ability of focusing on students' learning in the planning, implementation and evaluation of teaching activities, and thereby stimulating their work and ability to see the subject in a broader perspective. The lecturer's ability for mutual communication with the students, a holistic approach and aspiration for renewal are also of major significance.

Development of teaching expertise over time is to be evident and the lecturer's ability to deliberately and systematically develop their teaching expertise as well as that of the organisation should emerge.

If the applicant has obtained the title of ETP¹ (*Excellent Teaching Practitioner*) all the criteria as specified above for a very high level of teaching expertise will be considered met.

Examples

- A. For recruitment, the requirement is at least five weeks' training in teaching and learning in higher education (related to the national goals of the Association of Swedish Higher Education, SUHF), unless there are special reasons to the contrary or if equivalent knowledge has been acquired in some other way. If there are special reasons, e.g. when the applicant has not had the opportunity to acquire such knowledge in their previous position,

¹ LTH invites its teaching staff (not doctoral students) to apply for assessment of their teaching qualifications and to be admitted to LTH's Pedagogical Academy. All admitted teaching staff receive the teaching qualification level of Excellent Teaching Practitioner (ETP).

appointment may still take place. In that case, the employee is to undergo training in teaching and learning in higher education during the first two years of employment. Equivalent knowledge can have been acquired in some other way, in which case an assessment of equivalence is to be carried out.

- B. Relevant subject knowledge means broad, solid and current knowledge within the relevant teaching subject and strategies to support the work of students in mastering the subject to achieve increasingly complex and usable knowledge.
- C. The assessment of the applicant's educational ability and teaching experience is based on their previous practice and experience from various teaching situations, on different levels, and using different forms of teaching and examination, as well as their ability to reflect on these. The applicant bases their educational practice on students' learning and uses their knowledge of teaching and learning to develop teaching expertise and to function well in their educational capacity in relation to the students. In addition, the applicant's ability to structure and organise a body of knowledge, and to communicate engagement and interest in the subject is of importance.
- D. Educational leadership can be formal, e.g. in the form of assignments as director of studies or programmes director, or informal. Its significance for educational expertise is determined by the extent to which the leadership impacts the educational development of individuals as well as for the entire organisation or parts of it. Educational leadership comprises the promotion of an educational discussion and systematic quality enhancement and work on the basis of general objectives and frameworks.
- E. The applicant shows, in their teaching practice over time, deliberate and systematic development of their own way of supporting students' learning. The applicant takes part in collegial exchanges of experiences on teaching practice and their knowledge of teaching and learning through collaboration and interaction with others. This is demonstrated for example through the communication of educational knowledge, research and methods or the ability to develop teaching materials to stimulate and improve learning. The applicant has credible ideas

and concrete plans for the continued development of their educational work.

- F. The applicant reflects on their teaching practice using knowledge of teaching and learning which is relevant to their subject. The applicant reflects on the students' learning in their own subject. The educational reflection is to demonstrate expertise, maturity and assumption of responsibility in the applicant's own teaching practice.

Assessment criterion 3

A good ability to supervise doctoral students to achieve a PhD and/or students on arts programmes to achieve artistic independence.

Sub-criteria

- A. The applicant is to have extensive experience of supervising doctoral students. In case of promotion, the applicant is to have been the principal supervisor of at least two doctoral students from admission to public defence of the doctoral thesis, of whom at least one during the past five years, and is to have at least one active doctoral student.
- B. The applicant shows a reflective approach to the supervision of doctoral students.
- C. The applicant has documented PhD programme activities beyond the supervision of doctoral students.

Examples

- A. The assessment of a good ability to supervise is only exceptionally to take into account the applicant's experience as a de facto principal supervisor. This concerns a registered assistant supervisor who has acted as principal supervisor. Such a role must be certified. If the applicant originates from an organisation outside academia, other experience can be taken into account, such as mentoring, supervision of new employees, etc.
- B. In their reflection, the applicant shows a deliberate and systematic approach to the supervision of research students towards independence as researchers. The applicant reflects on

the supervisory practice using knowledge of supervision and learning as well as their own practical experience.

- C. PhD programme activities beyond the supervision of doctoral students is proven by the applicant having developed and implemented PhD courses, organised new graduate schools and PhD programmes, taken part in seminar activities intended for research studies or contributed to the assessment of research students, or equivalent activities if the applicant originates from an organisation outside academia.

Assessment criterion 4

Good ability to cooperate with wider society and communicate his or her activities

Sub-criteria

- A. The applicant has actively participated in various forms of collaboration between academia, business/industry and wider society.
- B. The applicant has actively disseminated and generated understanding for research and development.

Examples

- A. Information and interaction with agents outside the university world applies to activities which concern the subject area of the applicant. The applicant has taken initiatives for and/or participated in making research findings practically usable. Experience of innovation processes and entrepreneurship, as well as the ability to capture and process relevant problems and issues in society are taken into account. Interactions with business and industry can mean having developed a structured collaboration with companies, having obtained a patent and/or developed products/processes. Participation in various kinds of research communities, interest groups, trade associations etc. is also taken into account.
- B. The applicant has communicated research findings for example by participating in popular science contexts, holding public lectures or writing debate articles relevant to the research

subject. The applicant has taken part in activities which increase interest in engineering and science at various levels within primary, secondary and upper secondary school and among the general public.

Assessment criterion 5

Good general ability to lead and develop activities

Definitions:

Management: A management position presumes a formal appointment, budget responsibility and direct operational leadership responsibility. Management always includes leadership. Academic management positions are appointments as head of department/director, for example.

Leadership: This refers to a leading role which entails, for example, coordination, communication and pursuing issues. A good leader is sensitive to the needs of the organisation and shows skill in adapting the leadership to the situation and the surroundings.

Sub-criteria

- A. The applicant shows a good ability for leadership.
- B. In case of promotion, the applicant is to have undergone leadership training.

Examples

- A. Leadership can be shown through the ability to plan and adapt activities according to set regulations and financial frameworks, and showing commitment to the organisation's long-term strategic work. Leading and developing research teams is a further way of demonstrating leadership. Academic leadership can be demonstrated through academic management, but also entails being a member in boards and committees within the faculty and the university, or holding positions as a representative of one's organisation in national and international organisations and working groups. Administrative training in

subjects such as finance and the work environment is also taken into account.

- B. Completed leadership training can be courses in leadership, project management training or suchlike.

Appointment as an adjunct professor

The purpose of an adjunct professor is to add unique expertise which is not present within the regular organisation. The applicant is expected to be a leading specialist who can actively reinforce or complement the existing research and educational activities.

Pursuant to the Higher Education Ordinance, an adjunct professor shall be employed for an indefinite period but for no longer than until a specified date. An appointment as adjunct professor can be renewed, but the total period of employment is not to exceed twelve years. In order to be eligible for an adjunct position, the applicant must have their principal activity outside academia. This means that a person can be appointed as an adjunct for up to 50% of full-time employment.

Qualification requirements and assessment

In compliance with Lund University Appointment Rules, an adjunct professor is to meet the qualification requirements and assessment criteria that apply to appointment as professor. The qualification requirements may be waived if the applicant has a unique expertise of particular importance to the activity in question, or to reinforce the organisation's links to wider society. Other skills besides teaching and artistic expertise can be given special importance in the general assessment of skills, e.g. qualifications from professional life and specialist knowledge. The requirement for teaching skills is to be considered against the background of the organisation from which the applicant originates.

Complementary examples for the assessment of adjunct professors

It is important that all qualifications, including those which are not traditionally academic, are presented in such a way as to allow them to be assessed by the Academic Appointments Board and by the experts.

In the assessment of expertise, it is also important to have access to the documentation which demonstrates the applicant's ability to reflect on their activities and in what way the potential position as adjunct professor could contribute to a stronger exchange between the University and business/industry and wider society. It is to be clear how the applicant has developed their skills within the relevant subject area over time.

In addition to the assessment criteria and clarifying examples presented earlier in this document, some examples particularly intended for adjunct professorships are included below:

Research expertise, see Assessment criterion 1

Research expertise can be demonstrated through success in research and development projects for which the applicant has had a crucial role as a specialist. Experience from industrial contexts which complements academic work and which has left documented contributions to the development of engineering can be taken into account. Besides the traditionally documented research production, the documentation may consist of reports, patents, internally developed research and development contributions or standards, as well as various types of evaluations or investigations in which the applicant's specialist skills have been essential.

Teaching expertise, see Assessment criterion 2

Teaching expertise can have been demonstrated in an academic environment or within society and business/industry. Teaching expertise can be demonstrated through various types of leadership, supervision/mentoring, education, communication

and knowledge transfer aimed at various stakeholders and target groups in business and industry, organisations, etc.

Appointment as an adjunct professor requires at least five weeks' training in teaching and learning in higher education, or equivalent. If there are special reasons, e.g. when the applicant's previous position did not allow the acquisition of such knowledge, appointment can still occur. In such cases, the applicant is to undergo training in teaching and learning in higher education during the first two years of the appointment. If the duration of the appointment is a maximum of one year, or if the scope of employment does not exceed 20 %, the requirement for five weeks' training in teaching and learning in higher education does not need to apply. In such cases, the appointee is to undergo an adapted training course in teaching and learning in higher education, taking the work duties included in the appointment as a starting point.

Supervision of doctoral students, see Assessment criterion 3

Other experience of supervision besides the supervision of doctoral students can be considered, such as mentorship, supervision of new employees, etc.

External engagement and information, see Assessment criterion 4

Just as in the recruitment of professors, the applicant is to be active nationally and/or internationally, e.g. through participation in industrial or other trade/society-related networks.

Leadership, see Assessment criterion 5

The applicant is expected to have a leadership role within the company/organisation.

Documents certifying the applicant's experience of business and industry as per the example above are to be attached to the application.

Appointment as a visiting professor

Pursuant to the Higher Education Ordinance, a visiting professor shall be employed for an indefinite period but for no longer than until a specified date. Such an appointment may be extended, but the total period of employment may not exceed five years. Normally, a visiting professor has their principal employment within higher education.

Qualification requirements and assessment

A visiting professor is to meet the qualification requirements for appointment as professor. In addition, the person is to have specific expertise of value to the organisation in question.