

Accreditation Report

Doctoral Studies in Humanities, Natural Science and
Engineering

University of Iceland

Expert Committee Report

January 2008

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1 Introduction

1.1 The Expert Committee

Hans Peter Jensen, Professor of Chemistry, former Rector of the Technical University of Denmark, Chairman.

Friedrich Seifert, Professor Emeritus of Geochemistry and Geophysics, University of Bayreuth, Germany.

Ann Kettle, Honorary Senior Lecturer in Mediaeval History, University of St Andrews, Scotland.

1.2 Liaison Officer

Eiríkur Smári Sigurðarson, Head of Division for Science and Innovation, The Icelandic Centre for Research – RANNIS, Reykjavik, Iceland.

1.3 Terms of Reference

The expert committee is appointed according to Article 4 of Rules No. 37 on Doctoral Studies in Higher Education Institutions to provide reference of the ability of higher education institutions to provide Doctorate degrees. The committee is to base its reference on the components of Article 3 of the same act. They are:

- a. Role and objectives of higher education institutions for organising doctoral studies.
- b. Definition of doctoral studies with regard to the National Qualification Framework issued by the Minister of Education.
- c. Title of degree and duration of doctoral study programme.
- d. Description of admission requirements and demands for satisfactory preparation.
- e. Description of application procedure.

- f. Information about structure of doctoral study administration, including doctorate committee, doctoral defence and qualifications requirements of examiners.
- g. Accreditation of the field of study by the Ministry of Education, Science and Culture.
- h. Supervisors' position within the relevant study field, activity in research and published work.
- i. Information about the structure of research activities and future strategy within the relevant field of study.
- j. Information about relation between undergraduate and graduate study programmes and the number of graduated students at Masters level for the past few years.
- k. Position of the higher education institution within the study and research field and its sub-fields in international comparison. Cooperation with research institutions at national and international level, higher education institutions and companies.
- l. Description of financing of doctoral studies.

In writing the report the committee noted a section in the application, marked with an “f” that did not fit the contents of Article 3. On closer examination the committee discovered that section “f” is indeed included in the Icelandic version of the rules but is not in the English translation on which it was asked to base its evaluation. Part “f” states: “Information on facilities and theoretical resources, number of teaching staff and their education and experience”. The committee decided to address this part of the application under heading “h”.

1.4 Working Method

The committee received an application with appendices (see Appendix 2) by email from the Ministry of Education, Science and Culture on 25 October 2007. The committee made a site visit to the University of Iceland on 4 December 2007 (see Appendix 1). It had the opportunity to hold discussions with senior management, members of faculty graduate studies committees, supervisors, PhD students. The

committee considered its conclusions and reported its first impressions to Ministry representatives on 4 December 2007. Following the visit, drafts of sections of the report were circulated and the committee agreed on a final version of the report by email correspondence.

The descriptive parts of the final version were sent to the University of Iceland for a check of factual errors and misinterpretations on 8 January 2008. The committee received three minor corrections to sections 3.b, 3.k and Annex 1. In addition it received additional information regarding the figures for master's degrees in chapter 3.j. The committee agreed to change the figures as they had no bearing on the accreditation.

1.5 Short evaluation of the work process

The accreditation committee functioned well from its first meeting in Iceland on 3 December. The members of the committee complemented each other in a well-balanced way, both during discussions with representatives from UI and among themselves.

Writing this report has been done in cooperation over the internet.

The foreign experts have in a very constructive way been supported in all practical aspects by Dr. Eiríkur Smári Sigurðarson from RANNIS. The experts are very grateful to Eiríkur Sigurðarson for the professional and unstinting support he provided during the working period of the committee.

2 University of Iceland

Since the establishment of the University of Iceland in 1911 it has been in a constant process of growth and development, for many years, for example, in cooperation with partner universities in the Nordic countries such as the Technical University of

Denmark, the Technical University in Trondheim, Chalmers University of Technology in Gothenburg and the Royal Technical University in Stockholm.

The role of UI has been and is to serve Icelandic society at all times and to promote progress and prosperity by providing the best available education to its future leaders and specialists.

This entails expanding and strengthening doctoral studies at the University of Iceland, even though the tradition in Iceland for many years has been to go abroad to obtain not only master's but also PhD degrees.

UI aims to increase the annual number of candidates awarded doctoral degrees by a factor of five over the next five years from the present number of between 10 and 15 a year, and it is further estimated that roughly one third of the doctoral students at UI in the future will be international students.

UI has already undertaken various measures in order to execute this strategy and it will continue to do so to an increasing extent as it is UI's assessment that the expansion and enhancement of doctoral studies is the key to the university's success in research in the future.

The University filed an application for accreditation of doctoral studies in the fields of humanities, natural sciences and engineering and technical sciences in October 2007 and plans to file another application for the rest of its accredited discipline areas during 2008.

3 State of PhD Studies at UI

a. Roles and objectives of higher education institutions for organising doctoral studies

Although the first doctoral degree was conferred in 1919, the University of Iceland has only offered organised doctoral programmes since 1990 and 78 doctoral degrees have been conferred since 1995. The overall role of the University is to serve Icelandic society at all times and to promote progress and prosperity by providing the best available education to its future leaders. Doctoral studies, in particular, are intended to provide students with knowledge and skills to carry out scientific research, acquire new knowledge and undertake work that requires training and skills in applying scientific methods. It has been recognised that a considerable increase in doctoral studies is necessary if the University is to achieve its ambition to gain a place among the world's leading universities. Research-related postgraduate study for masters and doctoral degrees is therefore a major area of growth and one of the most important aspects of the strategy and policy of the University. The agreement between the University and the Ministry of Education, Science and Culture signed in January 2007 states that the University will work to increase fivefold the number of doctoral graduates and double the number of master's level graduates until 2011. The University policy document for 2006 – 2011 contains the objective of greatly expanding doctoral studies so that: the number of registered doctoral students will rise to 350 by the beginning of 2009; international students will comprise 30% of the total of doctoral students in 2011; 10% of doctoral students will be on joint degree programmes with universities in other countries; and at least 65 doctoral candidates will graduate in 2011. In line with the University policy, faculties have been required to formulate plans for increasing their numbers of doctoral students. At this time the University is applying only for permission to offer doctoral studies in those disciplines which have already been accredited at sub doctoral level by the Ministry of

Education, Science and Culture, namely in the fields of humanities (including theology), natural sciences and engineering and technical sciences.

According to the regulations the individual faculties are responsible for their graduate programmes but the University is in process of establishing a Graduate School with the mission to assure quality in graduate education and enhance the educational experience of masters and doctoral students. The Graduate School will be an institute under the auspices of the University Council and a director will be appointed in 2008. Rules for the Graduate School were approved in May 2007, stating that the Graduate School is to be the forum for consultation and co-operation within the University as well as the contact point for partners nationally and internationally. Interdisciplinary programmes can be formally established within the Graduate School in co-operation with the relevant faculties. In order to ensure the standards and quality of graduate studies, it is intended that the Graduate School will monitor graduate programmes and oversee collaborative and joint degree arrangements; collect, analyse and distribute data and information; accredit supervisors; supervise the procedures for admission of graduate students, ratify the study plans of PhD students and monitor progression and assessment arrangements for doctoral students; organise training, conferences, seminars and lectures on issues relating to the role and aims of the Graduate School. As some of the supervisors met by the committee appeared to be unclear about this development, the University is encouraged to communicate more fully to academic staff the roles and objectives of the Graduate School.

The University of Iceland already has considerable experience in the organisation of doctoral studies. A significant increase in the number of doctoral students is planned over the next five years and this expansion is an important aspect of the strategic ambition to become a university of the first rank.

b. Definition of doctoral studies with regard to the National Qualification Framework issued by the Minister of Education

The University provided the committee with programme specifications for the doctoral programmes offered in the fields of humanities, natural sciences and engineering and technical sciences. These programme specifications define the nature and length of the programme, the entrance requirements, the total number of ECTS credits needed to qualify for the award of the degree of philosophiae doctor or PhD and the scope of the research project or thesis in ECTS credits. It is explained that doctoral studies are governed by the regulations of the faculty in which the programme is offered. The learning outcomes of the programme, or the criteria which a student should have fulfilled in addition to those fulfilled at lower levels, are described, in accordance with the National Qualification Framework, in terms of knowledge and understanding, type of knowledge, practical skills, theoretical skills, communication skills and information literacy and learning skills.

In the field of humanities doctoral programmes are offered in: Theology and Religious Studies, Comparative Literature, General Linguistics, English, Philosophy, History, Icelandic Literature, Icelandic Grammar, Translation Studies, and Archaeology. Examination of the programme specifications showed that the programmes of study were fully and accurately defined and that the learning outcomes had been carefully formulated and were appropriate both to the subject of study and to level 5 of the third cycle of the Framework.

In the field of natural sciences doctoral programmes are offered in: Mathematics, Food Science, Human Nutrition, Biochemistry, Chemistry, Geography, Geology, Tourism Studies, Physics, Geophysics, and Biology. Examination of the programme specifications showed that the programmes of study were fully and accurately defined and that the learning outcomes had been carefully formulated and were appropriate both to the subject of study and to level 5 of the third cycle of the Framework.

In the field of engineering and technical sciences doctoral programmes are offered in: Mechanical Engineering, Industrial Engineering, Bioengineering, Computer Science,

Software Engineering, Computational Engineering, Physics Engineering, Electrical and Computer Engineering, Food Engineering, Civil Engineering, Environmental Engineering and Environment and Natural Resources. Examination of the programme specifications showed that the programmes of study were fully and accurately defined and that the learning outcomes had been carefully formulated and were appropriate both to the subject of study and to level 5 of the third cycle of the Framework.

In the opinion of the committee the academic requirements of the programmes offered in the fields of humanities, natural sciences and engineering and technical sciences fulfil the requirements of level 5 of the third cycle of the National Qualification Framework for Iceland.

c. Title of degree and duration of doctoral study programme

The title of the degree is Doctor of Philosophy (*philosophiae doctor*) or PhD. The rules of the individual faculties on doctoral studies specify the maximum length of the programmes and these are also defined in terms of ECTS credits in programme specifications. In general the length of the programmes is between three and five years of full-time study and the equivalent in part-time study. Provision is made in faculty rules for part of a doctoral programme to be spent in a university or accredited institution abroad.

d. Description of admission requirements and demands for satisfactory preparation

According to the Rules of the University of Iceland the completion of a *candidatus* or master's degree or an equivalent professional qualification is generally required for admission to doctoral study. The rules of individual faculties specify the admission requirements for doctoral programmes in that faculty. The Faculty of Theology requires the successful completion of a master's or *candidatus* degree in theology with a grade point average (GPA) of at least 7.25 (first class) for admission to

doctoral studies. The Faculty of Humanities requires a master's degree with a GPA of at least 7.25; additional academic requirements may be required of applicants who lack appropriate qualifications. The Faculty of Natural Sciences requires the completion of a master's degree in the faculty or a comparable degree approved by the faculty; an applicant may be admitted without having completed a master's degree but in that case must have completed a bachelor of science degree with a GPA no lower than 7. The Faculty of Engineering requires a master's degree from the faculty or a comparable degree from a research university for admission to a doctoral programme.

e. Description of application procedure

According to the Rules of the University of Iceland each faculty authorised by the University Council to award master's or doctoral degrees has a special standing committee to consider applications for admission, approving changes to study schedules and dealing with other matters entrusted to it by the faculty; a faculty is permitted to assign particular responsibilities of the standing committee to its departments. Deadlines for applications are set out in the Rules of the University. Applications are made to the relevant faculty and must, as a rule, be accompanied by a draft study schedule, a description of the research project and a plan of research; the applicant names a supervisor if this is required by the regulations of the faculty concerned. If the applicant intends to apply for funding this should be stated in the application.

The Faculty of Humanities requires that copies of diplomas, a 200-word scholarly statement of purpose and a preliminary draft of a course of study should accompany applications for admission to doctoral programmes; samples of the applicant's work may also be required. If a request is made for a particular supervisor, the application must contain the potential supervisor's agreement to take on the project as presented in the preliminary draft of the course of study. Applications are sent for consideration by the faculty office to the relevant department or to an expert panel when a doctoral programme is based on an interdisciplinary collaboration between departments. An

application may be rejected if the applicant's proposed course of study or other elements of the application are considered insufficient, or if there are no experts available in the relevant field. A recommendation for acceptance or rejection is made to the faculty's committee for graduate studies, whose responsibilities include ensuring that appropriate consistency is maintained in handling applications for doctoral programmes. The committee for graduate studies processes the application and the faculty office notifies the applicant and the Student Registration Office of the decision.

The Faculty of Natural Sciences requires that applications for admission to doctoral programmes should be accompanied by an outline of the intended curriculum that has been drawn up in consultation with the relevant department or research institute, a clear description of the research project and a research plan. Applications are sent for consideration by the faculty office for consideration by the relevant department. Discussions in the department concern the quality of the application, entrance requirements, the qualifications of the supervisor if one is named and the facilities available for the research project. If a department approves an application, a supervisor is appointed. After consideration by departments, the faculty's research committee processes applications and the faculty office notifies the applicant and the Student Registration Office of the decision.

The Faculty of Engineering requires that applications for admission to doctoral programmes include an outline of the intended course of study and research. The faculty's research committee reviews the application and submits it to the faculty council, which then accepts it or rejects it, with supporting arguments. If the faculty council approves the application, the relevant department names a course supervisor and the applicant and course supervisor submit a final course and research plan for the department to discuss. Departmental approval of the planned course of study is submitted to the research committee for confirmation. When the research committee has approved the plan of study, the processing of the application is complete and the Student Registration Office is informed.

f. Information about structure of doctoral study administration, including doctorate committee, doctoral defence and qualifications requirements of examiners

The University Rules set down the basic structure of the administration of doctoral studies, including doctoral committees, doctoral defence and the qualifications required of supervisors and examiners. Within these rules, individual faculties regulate their doctoral programmes and administer them through special standing committees. There are some variations between faculties, mainly in terminology and in the balance between course work and the thesis component of the programme. In the opinion of the committee these variations are appropriate to the fields covered in the application and none of the faculty regulations are at variance with the University Rules.

The regulations of the Faculty of Theology closely follow the University Rules. At the start of the programme each student is assigned a tutor with whom to discuss the study programme and the selection of courses; the tutor and the student jointly submit a study plan to be approved by the faculty. The role of the thesis supervisor is to assist the student with the final thesis and the tutor and the thesis supervisor are usually the same person although it is possible to appoint an external supervisor provided they are appropriately qualified. Those who supervise doctoral students must hold doctoral degrees themselves. Care must be taken to ensure that the student's project lies within the supervisor's area of specialisation and that the supervisor has published within the area. A doctoral committee is appointed by the faculty comprising three to five members with appropriate expertise, one of whom is external to the faculty. The role of the doctoral committee is to keep track of the progress of the student and, approximately midway through the course of study, examine the student's general scholarship and knowledge of research methodology in the field concerned. Before the doctoral defence can be held, the doctoral committee must deliver a reasoned opinion to the faculty as to whether the student should be given the opportunity to submit the thesis for defence. If the faculty considers the thesis acceptable for defence, two opponents are appointed for the oral defence of the thesis. The defence is

held in public and, following the oral defence, the dean, together with the opponents decides whether the doctorate shall be awarded.

The regulations of the Faculty of Humanities have recently been revised. The committee for graduate studies appoints an advisor for each doctoral student on admission; the advisor must hold a doctorate or the equivalent, be active in research and a qualified specialist in the relevant field of study and have experience as an advisor for graduate students and experience in collaborative research outside the University of Iceland. The advisor formulates with the student a course of study which is submitted to the committee of graduate studies for approval. The role of the advisor is to monitor the student's progress and to offer guidance for the doctoral project. The advisor reports on the progress of the student to the department before the end of each academic year and the department submits a report, in turn, to the committee for graduate studies. During the first year of study the committee for graduate studies appoints a doctoral committee, consisting of the advisor and two to three qualified specialists who hold a doctorate or the equivalent; at least one member of the committee must come from outside the relevant department. The advisor monitors the student's progress until the thesis is ready for defence and the other members of the doctoral committee evaluate the progress and provide guidance when required. Before the doctoral defence can take place the doctoral committee must submit a recommendation to the dean as to whether the defence should take place. The regulations contain detailed information on the requirements for theses and the way in which they should be presented. Once the thesis has been submitted the dean nominates two opponents who must hold doctorates or the equivalent but who must not have sat on the doctoral committee; wherever possible one of the opponents should be from a university or research institute abroad. Opponents are expected to recommend whether the thesis is eligible for defence, together with suggestions for changes. The doctoral defence is held in a forum open to the public and, following the oral defence, the dean, together with the opponents decides if the doctorate should be awarded.

Doctoral students in the Faculty of Natural Sciences are assigned a supervisor from the start of the programme and an instructor to supervise the final research project; usually the same person functions as both supervisor and instructor. The supervisor must be a permanent member of staff and familiar with the organisation of the course of study. The instructor must be recognised as a specialist in the area of the research project and have published in the relevant field. The faculty council appoints a doctoral committee, following a recommendation from the department. The doctoral committee consists of three appropriately qualified members, one of whom is the supervisor and another of whom is external to the department. The doctoral committee tests the student in the middle of the course of study on general academic knowledge and research methods and before the defence of the thesis recommends to the department whether the candidate should be given the opportunity to defend the thesis. The faculty council appoints two respondents or opponents for the doctoral defence who are not members of the doctoral committee; one of the respondents comes from outside the faculty and preferable from an overseas university or research institute. The thesis is defended in public and assessed by the respondents, according to the Rules of the University.

The regulations of the Faculty of Engineering are similar to those of the Faculty of natural Sciences, apart from the fact that the course supervisor and the study plan are approved before admission. The course supervisor, who is appointed from the permanent staff of the faculty and must hold a doctorate, is available for consultation on the organisation of the course of study. A research supervisor, who must be a recognised authority in the area of the research project and have published in the relevant field, provides specialist advice on the research project. Usually the same person functions as both course supervisor and the research supervisor but the faculty may appoint a qualified external research supervisor. The faculty council appoints a doctoral committee following a recommendation from the research committee. The doctoral committee consists of at least three experts, one of whom is the course supervisor who chairs meetings of the committee and another is external to the student's department. No later than the mid point of the course of study the student submits and defends a research proposal. The doctoral committee assesses the

proposal and at the same time tests the candidate on general knowledge and research methods. Prior to the defence of the thesis, the doctoral committee recommends to the faculty whether the candidate should be given the opportunity to defend the thesis. On the recommendation of the research committee the faculty appoints two opponents who may not be members of the doctoral committee; at least one of the opponents must be from an overseas university. The thesis is defended in public and assessed by the opponents, according to the Rules of the University.

In the opinion of the committee the Rules of the University and the regulations of the faculties concerned provide an appropriate structure for the administration of doctoral programmes and the supervision and assessment of doctoral students. The committee was informed that it is intended that the Graduate School should supervise admission procedures, approve study plans and any changes to them, ensure that supervisors meet the qualification requirements of the University and generally act as a monitor to ensure that the Rules are observed by the faculties. As the numbers of doctoral students increase, the Graduate School will have an important role to play in the maintenance of standards, the monitoring of quality, the harmonisation of procedures and the dissemination of good practice.

g. Accreditation of the field of study by the Ministry of Education, Science and Culture.

The University of Iceland has accreditation for sub-doctoral degrees in the relevant fields of study. The Faculty of Humanities and the Faculty of Theology received accreditation within the field of Humanities on 3 September 2007. The Faculty of Science received accreditation in Natural Science on 3 September 2007. The Faculty of Engineering and Technology received accreditation in Engineering and Technology on 3 September 2007.

h. Supervisors' position within the relevant study field, activity in research and published work

An overview of the overall ranking of Iceland according to OECD standards for R&D expenditure is given in the application and according to these data Iceland ranked fifth in 2005. In terms of relative citation impacts in ISI journals by field in 2001 to 2005, Iceland – and therefore probably also UI as the major contributor - ranks 3rd after the US and Switzerland, in 23rd place in Engineering and Technology, and in 4th place in the Humanities. The national and international research output of the individual academic staff members can be measured by the elaborate formal system of measuring academic performance and the research points given in this system, added up by faculty, reflects the research activity of faculties. According to this ranking system, Humanities ranked first in 2006, closely followed by Science, then Social Science, Medicine, Engineering. For the University as a whole there has been a steady increase in research points awarded from 1999 to 2006.

With respect to research points per academic staff member (taking into account the varying size of the faculties), Theology is first (37 points in the year 2006), and the other three faculties are very close (28, 28 and 26 research points, respectively). In terms of this parameter the four faculties considered here are all above the average for all faculties (25), i. e. we are dealing here with those parts of UI that are particularly strong in research. The number of ISI-documented articles in the year 2005 is highest for Medicine (101), followed by Science (79), and Engineering (21).

For all supervisors in the PhD programmes links to *curricula vitae* were given, with information on their careers, expertise in special fields, publications and teaching activities. These show that individual researchers are well-networked internationally, both by personal contacts, mostly originating from their education abroad, and by formal collaboration with major international universities and research institutes. A decrease by about 25% in the number of collaborations with foreign universities and research institutions between 2004 and 2005 remains, however, unexplained.

i. Information about the structure of research activities and future strategy within the relevant field of study

Research activities are focussed on research institutes (formed by a combination of expertise in departments) under the jurisdiction of the faculties and on interdisciplinary research institutes under the jurisdiction of the University Council or – after its establishment in 2008 – of the Graduate School (see above). In addition, there are research institutes affiliated to the University by contract with a collaborative party. This structure appears to be flexible enough to allow the individual thesis supervisors and the PhD students sufficient freedom to select relevant research topics with due consideration of Icelandic strengths, but also to offer room for expansion into new subfields and for opportunities in interdisciplinary research.

The application gives a very positive and optimistic outlook for the future development of all research programs in terms of the number of graduates, international exchanges, funding, staffing, administration, ties to the private sector, etc. The realization of these ambitious goals will certainly require a concentrated and well co-ordinated effort from all parties concerned, and in which the Graduate School will have to play a leading role (see f. above).

j. Information about relation between undergraduate and graduate study programmes and the number of graduate students at masters level for the past few years

The total number of graduate students at UI has more than doubled between 2003 and 2007 (the number of master's students from 882 in 2003 to 1849 in 2007, doctoral students from 82 in 2003 to 216 in 2007). In the same time span, the total number of master's degrees awarded increased from 240 to 490 between the years 2003 to 2007, and all the four faculties involved in the present application have contributed to this increase. The total number of PhDs awarded at UI has increased from 9 in 2003 to 15 in 2006, but the numbers are too small to draw any conclusions with respect to

individual faculties. It can, however, be concluded from the figures presented that UI is increasing the basis in human capital for future PhD studies.

k. Position of the Higher Education Institution within the study and research field and its subfields in international comparison. Cooperation with research institutions at national and international level, higher education institutions and companies

In all the PhD programmes under consideration the accredited supervisors and their institutes have strong international connections and ongoing formalized collaborations via, for example, EU research programmes, student exchange programmes (ERASMUS, SOCRATES), the Nordic countries (NORDPLUS, NORDITA), etc. Such global activities are particularly strong in fields of special Icelandic expertise, in, for example, volcanology (Nordic Volcanological Centre) or geothermal energy (Geothermal Training Program of the UN) or earthquake engineering, whereas they seem to be slightly weaker in the Faculty of Theology where, by nature and tradition, the focus is mostly on Icelandic or at least Nordic projects.

Many supervisors also act as editors of major international journals or serve on advisory boards, which increases their visibility in a global context. The vast majority of supervisors have received their PhD degrees from universities abroad (see section h. above) and these continuing personal networks also assist in the exchange of research students and the formulation of joint international projects. Compulsory periods of study for between 3 and 12 months at foreign universities or research institutions in the framework of the individual PhD programmes help to strengthen these ties, to avoid inbreeding, and to familiarize the graduate student with an international research environment. Furthermore, the committee was assured that joint degrees with universities abroad are possible in all the PhD programmes for which accreditation is requested.

The faculty of Engineering has a long standing relationship with local companies as listed in the application. The fields are energy development, IT technology and food

production, but also other high technology companies are getting into close contact with the university.

I. Description of financing of doctoral studies

The doctoral programmes at the University of Iceland are presently supported by contributions towards teaching and research costs allocated to the faculties by the University Council, and by a lump sum for each graduated student. Nearly a half of the current PhD students are fully funded by the University (Eimskip Fund, Research Fund, Teaching Assistantships). The level of stipends was considered to be satisfactory by most of the students met by the committee. For the remaining students additional funding may be available by means of grants to individual supervisors from national or international agencies and companies, or RANNIS grants, or government loans.

Considering the planned expansion in the number of PhD students and the general strengthening of research, the university bodies will have to make sure that the existing and additional funds that will become available are distributed in such a way that the balance between infrastructure costs (laboratories, library, computing, offices) and the support to students is optimized for maximum efficiency.

4 Issues arising

1. During the discussion with the Rector of University of Iceland it was made clear that UI in its present application is seeking accreditation for PhD programmes for those areas in which UI already possesses accreditation for sub doctoral degrees. A further application for the accreditation of PhD studies in the remaining discipline areas is to be expected next year.

In the opinion of the committee this is to be welcomed as these discipline areas will also then be subject to relevant management by the Graduate School to be established by the University

2. During discussions with those responsible for developing the Graduate School, research expertise in the area of theology was brought up, especially as staff do not publish extensively outside the Nordic countries. The university is aware of this problem and is working on it in cooperation with the faculty itself.

The committee recommends that a particular focus is kept on the area of theology so that staff can become more internationally oriented. This could be done through exchanges, research leave, participation in international, not only Scandinavian, networks, etc.

3. As mentioned above, the committee encountered several supervisors who were unclear of the role which the Graduate School is going to play in the development of the PhD programmes at the University.

The committee welcomes the establishment of the Graduate School because it will help to meet many of the challenges posed by the University's intention to increase the numbers of graduate students, but considers that there may be a communication problem and that the University should make an effort to inform staff and students about the future role of the Graduate School.

4. At various meetings issues such as stipends, working space and housing accommodation for PhD students came up. It was said that things were improving at the moment, but if there is going to be a five-fold expansion in the number of PhD students, with 30 % of these international students, UI is facing a big challenge.

The committee supports the ambition of UI to expand and internationalise doctoral studies, but these ambitions call for improved financing and organisation of the studies and their infrastructure.

5. In discussion with academic staff considerations were expressed about whether there would be sufficient staff to support a five-fold increase in the number of doctoral students. Many of the current staff felt overworked and

could only see the ambitions being achieved by a considerable increase in the number of academic appointments.

The committee takes note of this view and would urge the management of the University to look into the workload of academic staff. It is clear that the running of PhD programmes requires staff who are able to supervise PhD students, while at the same time conducting their own research and performing other academic duties.

6 In meeting current PhD students some frustration and confusion was expressed relating to the financing of their studies, the accommodation situation (especially for international students), the structure of their studies and the various restrictions that the University might impose on them.

It is the opinion of the committee that the University should try to communicate to current PhD students, possibly through the newly-established Graduate School, what is going on at the strategic level in relation to the development of doctoral studies. In addition it might be fruitful to establish some permanent contacts with the doctoral students by means of a PhD student council or something similar.

7 It is important that PhD students should be engaged in teaching as many of them will be university staff in the future; teaching, however, requires certain skills.

It is the opinion of the evaluation group that the University should provide PhD students with formal courses in university teaching methods, as happens in most universities at the moment.

8 The PhD students who met the committee were somewhat worried about the availability of office space in the future when so many more PhD students are anticipated.

In the opinion of the committee to the University will need to ensure that the required infrastructure is in place when the planned expansion of PhD programmes takes place.

9 Some PhD students who met the committee were concerned about access to books and library facilities, if internet access to electronic resources were to be considered sufficient.

It is the opinion of the committee that the University should plan in such a way that both library facilities and internet access to resources for research should be at a competitive level in comparison with those universities with which UI wants to cooperate and benchmark.

10 In discussion with supervisors a lot of frustration came up centred around the lack of adequate resources, e.g. the manpower required to meet growing teaching obligations, stipends to PhD students, office space, laboratory space, technical support in science and engineering, salaries, etc.

It is the opinion of the committee that the financial and infrastructural consequences of a five-fold increase in the number of PhD students is a theme which needs to be addressed in contacts between the university management, the deans and representatives from the academic staff.

5 Recommendations

1. The application from University of Iceland was somewhat uneven, in parts too long and unfocused. It presented, however, high ambitions for the future of doctoral studies at the University
2. The answers provided in the application in relation to the Questions (a-1) from the ministry were well-prepared and well-written.
3. The University of Iceland has a devoted management in the form of the Rector, Deans, Graduate School management and members of faculty standing committees).
4. The University of Iceland has active and engaged academic staff and doctoral students. However, communication of strategies on the development and expansion of doctoral studies to the various groups involved at departmental level the needs to be improved.
5. The Accreditation Committee recommends that University of Iceland is given the right to award PhD degrees in the fields of humanities, natural sciences and engineering and technical sciences.

6 Signatures of the Accreditation Expert Committee.

Prof. Hans Peter Jensen, *Denmark*
Chairman

Ann Kettle, University of St Andrews, *Scotland*

Prof. Emeritus Friedrich Seifert, *Germany*

Appendix 1: Agenda of site visit of Expert Committee to the University of Iceland 4 December 2007

09:00-09:30 Visit to Rector at her office

09:30-10:30 Introduction to the Graduate School and discussion

Jón Atli Benediktsson (Head of Development), Þórður Kristinsson (Head of Division for Academic Affairs), Sigurður J. Grétarsson (Head of Committee for Academic Affairs) and Halldór Jónsson (Head of Division of Science and Research)

10:30-10:45 Coffee

10:45-11:45 Meeting with Deans

Róbert H. Haraldsson (Faculty of Humanities), Hjalti Hugason (Faculty of Theology), Ebba Þóra Hvannberg (Faculty of Engineering) and Lárus Thorlacius (Faculty of Science).

11:45-13:00 Lunch

13:00-14:00 Representatives of science committees or graduate study committees.

14:00-14:15 Break

14:15-15:45 Meeting with representatives of doctoral students

15:45-16:00 Break

16:00-17:30 Meeting with supervisors

Appendix 2: List of documents received

Documents applying to the University as a whole

Appendix 1: Rules for the University of Iceland - No. 458/2000.

Appendix 2: Standards and requirements for quality of doctoral programmes at the University of Iceland.

Appendix 3: The University of Iceland Policy 2006-2011.

Appendix 4: Regulations for the Graduate School at the University of Iceland, no. 490/2007.

Appendix 5: Learning Outcomes for doctoral studies.

Appendix 6: Letters of September 3 2007.

Appendix 7: A list of academic staff members.

Appendix 8: Rules for the University of Iceland Institute of Regional Research Centres.

Appendix 9: The 2006 Financial Statement of UI

Appendix 10: University of Iceland Quality Assurance Programme.

Appendix 11: Rules for Evaluation

Appendix 12: Rules on the Professional Duties of Academic Staff.

Appendix 13: Rules on Promotion of Instructors, Specialists and Scholars at the University of Iceland - No. 863/2001.

Appendix 14: Overview of University of Iceland research institutes and affiliated institutions.

Appendix 15: Agreement between the Ministry of Education, Science and Culture and the University of Iceland, January 2007.

Appendix 16: An evaluation of scholarly work at the University of Iceland

Humanities

Appendix HA: Rules on research based studies at the Faculty of Theology

Appendix HB: Rules on Graduate studies at the Faculty of Humanities

Appendix HC: Rules for the University of Iceland Institute of Theology

Appendix HD: Rules for the Centre for Research in the Humanities

Natural Sciences

Appendix NA: Rules on Graduate studies at the Faculty of Science

Appendix NB: Faculty of Science self-evaluation report for External Peer Review
2006

Appendix NC: Rules for the University Institute of Biology

Appendix ND: Rules for the University of Iceland Science Institute

Appendix NE: External Peer Review Final Report 2006

Engineering and Technical Sciences

Appendix EA: Rules on Doctorate Studies at the Faculty of Engineering

Appendix EB: Rules for the University of Iceland Engineering Research Institute

Appendix EC: Policy of the Faculty of Engineering