



**LUNDS TEKNISKA HÖGSKOLA**  
Lunds universitet

## DIPLOMA SUPPLEMENT

This Diploma Supplement follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international "transparency" and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended.

### 1. Information identifying the holder of the qualification

1.1 Family name: Andén

1.2 Given name: Thomas

1.3 Date of birth (day/month/year): 14 August 1974

1.4 Civic registration number: 740814-3571

### 2. Information identifying the qualification

2.1 Date of issue: 15 August 2003

2.2 Name of qualification and (if applicable) title conferred (in original language):  
Civilingenjörsexamen i kemiteknik

2.3 Name of qualification and (if applicable) title conferred in official translation to  
English: Master of Science in Chemical Engineering

2.4 Main field(s) of study for the qualification: Chemical Engineering

**2.5 Name (in original language) and status of awarding institution:**

Lunds Tekniska Högskola vid Lunds Universitet (State). For further information, see 6.1.

**2.6 Name (in original language) and status of institution (if different from 2.5) administering studies:** Not applicable.

**2.7 Language(s) of instruction:** Mostly Swedish

**3. Information on the level of the qualification**

**3.1 Level of qualification:** Grundläggande högskoleutbildning (undergraduate education), 4.5 years.

This translation of level does not correspond to the British and American Systems. For further information, see 6.1.

**3.2 Official length of programme:** 180 credit points/270 ECTS credits

**3.3 Access requirement(s):** General eligibility is attained by completing an upper secondary school programme and obtaining a pass grade or better in courses comprising at least 90 per cent of the upper secondary credit points required in the programme, or by providing proof of an equivalent level of knowledge. Additional proof of specialized knowledge in natural science and mathematics is required.

**4. Information on the contents and results gained**

**4.1 Mode of study:** Full-time equivalent.

**4.2 Degree requirements:**

Scope

A Master of Science in Engineering shall be obtained after completion of course requirements of 180 credit points in total.

Objectives (in addition to the general objectives set out in chapter 1, section 9 of the Higher Education Act)

In order to obtain a Master of Science in Engineering, the student shall have

- acquired knowledge of mathematics and natural science subjects to the extent required to understand and be able to apply the fundamental aspects of mathematics and natural sciences in the chosen area of technology,
- acquired knowledge of and skills in the design of products, processes and working environments, taking into account the abilities and needs of human beings as well as society's objectives as regards social conditions, economy of resources, environment and economy,
- acquired the knowledge enabling him or her, after a few years' work experience within his/her field, to take independent responsibility for development or utilisation of new technology at an internationally competitive level.

The objectives set by the institution of higher education concerned shall in addition apply.

**4.3 Programme details (e.g. modules or units studied), and the individual grades/marks/credits obtained:** See degree certificate.

**4.4 Grading scheme and, if available, grade distribution guidance:** The student has passed all courses in the certificate in a formal examination. The Board of Undergraduate Studies decides which marking scale should be applied to a particular course. The graded marking scale comprises three levels: 3 (three), 4 (four), 5 (five). A higher figure signifies a better grade. The grade "Godkänd" means a pass for which a graded marking scale is not applicable. The diploma thesis is not marked on a graded scale. The graded marking scale is not based on ranking of the students. Courses taken at other faculties are graded according to a scale stated in the certificate.

**4.5 Overall classification of the qualification (in original language):** Not applicable for Swedish degrees.

**5. Information on the function of the qualification**

**5.1 Access to further study:** This degree gives general eligibility to PhD studies.

**5.2 Professional status (if applicable):** Regulated education in accordance with the Swedish Degree Ordinance and covered by directive 89/48/EEC amended by 2001/19/EC.

**6. Additional information**

**6.1 Additional information:**

By tradition, universities or faculties of engineering in Sweden are often named "Teknisk högskola" (Institute of Technology or University of Technology). Accordingly, Lunds Tekniska Högskola, which has issued this degree, is the faculty of engineering within Lund University.

Swedish universities offer two professional degrees in engineering: Högscoleingenjör (*BSc in Engineering*) and Civilingenjör (*MSc in Engineering*). The requirement for Högscoleingenjör is normally 3 years of studies (120 credit points/180 ECTS credits). The degree normally includes the field of study, e.g. *BSc in Electrical Engineering*.

The degree Civilingenjör (*MSc*) is normally awarded as a first degree after 4.5 years of studies. Optionally, a Civilingenjör degree can be obtained following studies on top of a Högscoleingenjör (*BSc*) degree. The requirement for a Civilingenjör degree is identical, regardless of the path of studies.

Both engineering degrees give general eligibility for admission to postgraduate studies.

## 6.2 Further information sources:

Office of Diplomas  
Lunds Tekniska Högskola  
Box 118  
SE-221 00 Lund  
Sweden  
+46 46 222 00 00  
<http://www.lth.se>

The Higher Education Sector of Sweden (National Agency of Higher Education)  
<http://www.hsv.se/english/sector/>

## 7. Certification of the supplement

7.1 Date: 26 August 2003

7.2 Signature and official stamp or seal (if used)



Marianne Abrahamsson

**LUND INSTITUTE  
OF TECHNOLOGY**  
Lund University

7.3 Capacity: Degree Officer

## 8. Information on the national higher education system

### The Swedish Higher Education System

(The following description is approved by the National Agency for Higher Education)

#### GENERAL

Higher education institutions have great autonomy in the organisation of studies, use of resources and general organisation. Diplomas from all higher education institutions recognised by the Government have equal official value. The higher education institutions in Sweden are designated as either "universitet" or "högskola". The status of "universitet" is awarded by the Government to higher education institutions fulfilling certain criteria. The same law governs all higher education institutions. Private providers of higher education may be recognised by the Government, obtain the right to award degrees and receive state subsidies. All recognised higher education is funded by the State. All university programmes and major subjects are to be evaluated by the National Agency for Higher Education every six years, starting in 2001.

#### GRADING

The Higher Education Ordinance states that the following grades can be used: Pass with Distinction ("väl godkänd"), Pass ("godkänd") or Fail ("underkänd") unless the institution decides to grade on some other scale. A number of courses use only two grades: Pass and Fail. Others, like Law and Engineering, traditionally use scales with several levels – expressed as letters or numbers. No overall grade is given for a degree.

#### DEGREES

Higher education is provided in the form of courses. These may be linked to constitute degree programmes with varying levels of individual choice. Students themselves are also able to combine different courses into a degree. A course syllabus is required for each undergraduate course and a curriculum for each degree programme. Sweden has a system of credit points ("poäng"), one week of successful full-time study is equivalent to 1 credit point. One academic year usually yields 40 credit points. In the Degree Ordinance, the Government has laid down which degrees may be awarded and the objectives for these degrees. In the Swedish higher education system there are generally no intermediate qualifications. All degrees are regarded as final qualifications, even if there is a possibility to continue studying. Degrees are divided into general degrees and professional degrees.

#### General degrees:

1. "högskoleexamen" requiring a minimum of 80 credit points
2. "kandidatexamen" requiring a minimum of 120 credit points with 60 credit points in the major subject including a thesis/degree project of 10 credit points
3. "magisterexamen med ämnesdjup" requiring a minimum of 160 credit points with 80 credit points in the major subject including one thesis of 20 or two theses/ degree projects of 10 credit points each

4. "magisterexamen med ämnesbredd" requiring a minimum of 40 credit points with specialisation including a thesis/ degree project of at least 10 credit points. A prerequisite for "magisterexamen med ämnesbredd" is a general or professional degree of at least 120 credit points or a comparable foreign degree.

"Kandidatexamen" and "magisterexamen med ämnesdjup" may indicate the major subject or faculty, e.g. "ekonomic magisterexamen". The most advanced courses (60-80 credits level) at "magisterexamen" can be accepted as partial fulfilment of the requirements of doctoral programme.

Institutions entitled to describe themselves as "universitet" have the right to award the degrees of "magisterexamen med ämnesdjup" and "magisterexamen med ämnesbredd". Institutions designated as "högskola" have a general entitlement to award the degree of "magisterexamen med ämnesbredd" but need to apply for the right to award the degree of "magisterexamen med ämnesdjup".

#### *Professional degrees*

Professional degrees are awarded in the fields of engineering, health care, agriculture, law, education, fine arts etc. Programmes leading to professional degrees vary in length depending on their character. There are around 50 professional degrees. Professional qualification also includes degrees in fine arts. Some of the professional degrees demand a previous undergraduate qualification as a prerequisite, especially within the field of health care. Institutions have to apply for the right to award professional degrees.

#### ACCESS AND ADMISSION TO HIGHER EDUCATION

Higher education in Sweden has two strata of eligibility: general/basic and (additional) specific requirements. The general eligibility is the same for all higher education. General eligibility is attained by completing an upper secondary school programme and obtaining a pass grade or better in courses comprising at least 90 per cent of the credits required for the programme, or by providing proof of an equivalent level of knowledge. People who are at least 25 years old, who have been employed for four years and who have a command of English and Swedish corresponding to that obtained by completing a national upper secondary programme are also considered to have general eligibility. The specific requirements vary according to the field of higher education and are expressed in terms of subjects in the upper secondary school. Numerous clauses is used for all study programmes and courses.

#### POSTGRADUATE TRAINING

Institutions entitled to describe themselves as "universitet" have permanent allocations of funds for research and postgraduate education and can award doctoral degrees, whereas for institutions designated as "högskola" these rights may be restricted to specific research areas only or they may have research links with a "universitet". Postgraduate training is based on undergraduate education of at least 120 credit points. Furthermore, the faculty board in question may stipulate additional requirements for admission. Postgraduate programmes nominally comprise 160 credit points (four years) and lead to a "doktorsexamen" (PhD). A PhD student must complete a number of taught courses and write a doctoral dissertation. The dissertation must be defended at a public oral examination. A "licentiatexamen" (licentiate degree) can be obtained after a minimum of 2 years, 80 credit points, including course work and a thesis. Normally students aim directly for a "doktorsexamen" but it is also possible to take a "licentiatexamen" as an intermediate degree. All faculties can award a "licentiat"- or "doktorsexamen", in which the discipline is named, e.g. "teknologie licentiatexamen" (Licentiate in Technology). However a faculty of engineering, like any other, may also award a "filosofie doktorsexamen" (PhD).