



## DIPLOMA SUPPLEMENT

This Diploma Supplement model was 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. It should be free from any value judgement, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

### 1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

- 1.1 Family name:
- 1.2 Given name:
- 1.3 Date of birth (day/month/year):
- 1.4 Student identification number or code if available:

### 2. INFORMATION IDENTIFYING THE QUALIFICATION

- 2.1 Name of qualification and (if applicable) title conferred (in original language):  
Teknologie masterexamen.
- 2.2 Main field(s) of study for the qualification: Chemistry and Chemical Engineering.
- 2.3 Name (in original language) and status of awarding institution:  
Kungliga Tekniska högskolan (state higher education institution with status of university)
- 2.4 Name (in original language) and status of institution (if different from 2.3) administering studies:  
Not applicable.
- 2.5 Language(s) of instruction: English.

### 3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

- 3.1 Level of qualification: Second cycle.  
For more information on higher education in Sweden, please go to point 8, appendix 2.
- 3.2 Official length of programme: 120 credits (equal to 120 ECTS credits). The extent of a course or study programme shall be denoted by credits, with full-time study during a normal academic year of 40 weeks corresponding to 60 credits. Ordinance (2006:1053).

The system is compatible with ECTS credits.

- 3.3 Access requirement(s): A person meets the general entry requirements for courses or study programmes that lead to the award of a second-cycle qualification if he or she:
  - 1. possesses a first-cycle qualification comprising at least 180 credits or a corresponding qualification from abroad, or

Name: \_\_\_\_\_, Student identification number: \_\_\_\_\_

2. by virtue of courses and study programmes in Sweden or abroad, practical experience or some other circumstance has the aptitude to benefit from the course or study programme.

Specific entry requirements

The specific entry requirements laid down shall be essential for students to be able to benefit from the course or study programme. These requirements may comprise:

1. knowledge from one or more higher education courses, and
2. other conditions determined by the course or study programme or of significance for the professional or vocational area for which students are to be prepared.

#### 4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of study: Full-time equivalent.

4.2 Programme requirements:

Higher Education Ordinance (1993:100) Master of Arts/Science (120 credits)

Scope

A Master of Arts/Science (120 credits) is awarded after the student has completed the courses required to gain 120 credits with a defined specialisation determined by each higher education institution itself, of which at least 60 credits are for specialised study in the principal field (main field of study) of the study programme. In addition the prior award of a Bachelor's degree, Bachelor's degree in fine arts, professional or vocational qualification of at least 180 credits or a corresponding qualification from abroad is required. The requirement of the prior award of a qualification may be waived for a student admitted to the programme without the basic entry requirement in the form of a qualification. This does not, however, apply if a waiver was granted during admission pursuant to the second paragraph of Section 28 of the Chapter 7 of the Higher Education Ordinance (1993:100) on the grounds that the qualification had not yet been issued.

Outcomes

Knowledge and understanding

For a Master of Arts/Science (120 credits) the student shall have: demonstrated knowledge and understanding in the main field of study, including both broad knowledge of the field and a considerable degree of specialised knowledge in certain areas of the field as well as insight into current research and development work, and demonstrated specialised methodological knowledge in the main field of study.

Competence and skills

For a Master of Arts/Science (120 credits) the student shall have: demonstrated the ability to critically and systematically integrate knowledge and analyse, assess and deal with complex phenomena, issues and situations even with limited information demonstrated the ability to identify and formulate issues critically, autonomously and creatively as well as to plan and, using appropriate methods, undertake advanced tasks within predetermined time frames and so contribute to the formation of knowledge as well as the ability to evaluate this work demonstrated the ability in speech and writing both nationally and internationally to report clearly and discuss his or her conclusions and the knowledge and arguments on which they are based in dialogue with different audiences, and demonstrated the skills required for participation in research and development work or autonomous employment in some other qualified capacity.

Judgement and approach

For a Master of Arts/Science (120 credits) the student shall have: demonstrated the ability to make assessments in the main field of study informed by relevant disciplinary, social and ethical issues and also to demonstrate awareness of ethical aspects of research and development work demonstrated insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used, and demonstrated the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

Independent project (degree project)

A requirement for the award of a Master of Arts/Science (120 credits) is completion by the student of an independent project (degree project) for at least 30 credits in the main field of study. The degree project may comprise less than 30 credits, however no less than 15 credits, if the student has already completed an independent project in the second cycle for at least 15 credits in the main field of study or the equivalent from a programme of study outside Sweden.

Local regulations

Teknologie masterexamen - Master of Science (120 credits) - is obtained after completion of an educational programme. These programmes must be designed so that students, when they graduate, have fulfilled national

Name: \_\_\_\_\_, Student identification number: \_\_\_\_\_

requirements for a degree and have completed courses comprising 120 credits of which 90 credits at second level, at least 60 credits with in-depth studies in the main field of study.

- 4.3 Programme details (e.g. modules or units studied), and the individual grades/marks/credits obtained:  
See the degree certificate/official transcript of records. The courses completed by the graduate are enumerated/specified/listed in the transcript.
- 4.4 Grading scheme and, if available, grade distribution guidance: For courses before 1 July 2007 the grading scale is: Five (5) Pass with Distinction, Four (4) Pass with Honours or Three (3) Pass  
For courses after 1 July 2007, the grading scale is: A-Excellent, B-Very Good, C-Good, D-Satisfactory, E-Sufficient. If the Pass Grade only is awarded, this is marked with an asterisk (\*)

No overall grade is given for a degree and students are not ranked.

- 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: The degree gives access to postgraduate training, third cycle.
- 5.2 Professional status (if applicable): No special information is indicated; gives access to employment.

6. **ADDITIONAL INFORMATION**

- 6.1 Additional information: The duration of the programmes is two years; three semesters of course work and one semester of final degree project/Master's thesis. The study language is English.
- 6.2 Further information sources: Kungliga Tekniska högskolan, SE-100 44 Stockholm, <http://www.kth.se>

National Agency for Higher Education, The Swedish ENIC/NARIC office, Box 7851, SE 103 99 Stockholm, <http://www.hsv.se>

7. **CERTIFICATION OF THE SUPPLEMENT**

- 7.1 Date:
- 7.2 Signature:

\_\_\_\_\_

- 7.3 Capacity:
- 7.4 Official stamp or seal:

Name: \_\_\_\_\_, Student identification number: \_\_\_\_\_

## 8. THE SWEDISH HIGHER EDUCATION SYSTEM

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

### GENERAL

Higher education institutions have great autonomy in the organization of studies, use of resources and general administration. The Government may award the status of *universitet* to higher education institutions that meet certain criteria. Independent higher education providers may apply for recognition by the Government, obtain degree awarding powers and receive state subsidies. Qualifications from all higher education institutions that are recognized by the Government have equal official value. The same law governs all state higher education institutions. All Swedish degrees are issued in accordance with the same qualifications ordinance.

### QUALITY ASSURANCE

The Swedish National Agency for Higher Education is responsible for quality assurance system for higher education. All study programmes have been evaluated since 2001. The Swedish National Agency for Higher Education has also completed two rounds of quality audits of higher education institutions. Evaluation reports are public.

### ACCESS AND ADMISSION TO

#### HIGHER EDUCATION

Higher education within all cycles has two strata of entry requirements: general and (additional) specific requirements. General eligibility to the first cycle is the same for all higher education. General eligibility is attained either by completing an upper-secondary school programme, completed adult education at upper secondary school level or having the potential to benefit from the education, by virtue of other education, practical experience or other circumstances. The specific requirements vary according to the field of higher education and are in general expressed in terms of upper-secondary school qualifications in specific subjects. Restricted admission is used for all study programmes and courses.

### DEGREE AWARDING POWERS

Universities have the right to award general qualifications at first, second and third cycle. A small number of university colleges have been awarded the general right to award first and second cycle qualifications, as well as the right to award third cycle qualifications in specific domain/s. Other state university colleges have the right to award first cycle qualifications and *magisterexamen* but must apply to the

Swedish National Agency for Higher Education for the right to award *masterexamen* and third cycle qualifications. University colleges that are selfgoverning and independent, as well as the Swedish University of Agricultural Sciences (SLU) and the Swedish National Defence College, must apply to the Government for the entitlement to award all qualifications. With regard to vocational or professional qualifications at first and second cycle, both state universities and university colleges must apply to the Swedish National Agency for Higher Education for degree awarding powers.

### QUALIFICATIONS

All courses and study programmes are placed within one of three cycles: the first, second or third cycle. All qualifications are placed within one of the three cycles. Higher education within the first and second cycles is provided in the form of courses. Courses may be grouped together into programmes with varying levels of individual choice. Students themselves are also able to combine different courses towards a degree. A course syllabus is required for each course within the first and second cycle and a programme syllabus for each study programme. Educational cycle and intended learning outcomes have to be specified for each course. Sweden has a system of credits (*högskolepoäng*); a normal 40-week academic year corresponds to 60 credits. The system is compatible with ECTS credits. In the qualifications ordinance, the Government has laid down which qualifications may be awarded and the objectives as well as intended learning outcomes for these qualifications. In the Swedish higher education system there are generally no intermediate qualifications. All qualifications are regarded as final, even if there is a possibility to continue studying. There are three categories of qualifications: qualifications in the arts, social science and sciences, in fine, applied and performing arts and professional qualifications. Translations into English of all Titles of qualifications are regulated at the national level. An institution of higher education may decide that a discipline precedes a qualification title e.g. *filosofie kandidatexamen* or *medicine doktorexamen* or/and add a major field of studies e.g. *civilingenjörsexamen i maskinteknik*.

### QUALIFICATIONS IN THE ARTS, SOCIAL SCIENCE, SCIENCE AND IN FINE, APPLIED AND PERFORMING ARTS

First cycle:

1. *Högskoleexamen* (Higher Education Diploma) requires 120 credits and a diploma project. The corresponding degree in fine, applied and performing arts is *konstnärlig högskoleexamen* (Higher Education Diploma).
2. *Kandidatexamen* (Bachelor of Arts/ Bachelor of Science) requires 180 credits with a defined main field of studies determined by each higher education institution itself. At least 90 credits with increasingly in-depth studies including a diploma project of 15 credits have to be completed in the main field of study. The corresponding degree in fine, applied and performing arts is *konstnärlig kandidatexamen* (Bachelor of Fine Arts).

Second cycle:

1. *Magisterexamen* (Master of Arts/ Master of Science (60 credits)) requires a defined main field of studies. At least 30 credits have to be completed in the main field of study including a thesis of 15 credits. In addition, normally the student must hold either a *kandidatexamen* or a professional degree of at least 180 credits or an equivalent foreign degree. *Konstnärlig magisterexamen* (Master of Fine Arts (60 credits)) is awarded in fine, applied and performing arts.
2. *Masterexamen* (Master of Arts (120 credits)/Master of Science (120 credits)) requires a defined main field of studies. At least 60 credits have to be completed in the main field of study including a thesis of 30 credits. In addition, in general, the student must hold either a *kandidatexamen* or a professional degree of at least 180 credits or an equivalent foreign degree. *Konstnärlig masterexamen* (Master of Fine Arts (120 credits)) is awarded in fine, applied and performing arts. The most advanced courses for *Masterexamen* may be accepted as partial fulfilment of the requirements for a doctoral programme. General admission requirements to qualification within the second cycle are: qualification within the first cycle of at least 180 credits or a corresponding foreign qualification. In addition, admission may be granted to an applicant who has the potential to benefit from the education, by virtue of other educational achievements,

Name: \_\_\_\_\_, Student identification number: \_\_\_\_\_

practical experience or other circumstances.

**PROFESSIONAL QUALIFICATIONS**

There are about 40 professional degrees. Professional qualifications are awarded in the fields of engineering, health care, agriculture, law, education, etc. Professional qualifications may be placed within either the first or the second cycle. With a few exceptions, general entry requirements to professional degrees are the same as to the first cycle. Programmes leading to professional qualifications may vary in length depending on their content and may stretch over two cycles.

Third cycle:

The Faculty Board decides which subjects may be offered within the third cycle. For every subject, a general study plan should be drawn up and approved by the Faculty Board. The study plan must state the principal organisation of the studies, the specific admission requirements, the examinations required towards the degree and whether the study programme may end with the award of a *licentiatexamen* or a *konstnärlig licentiatexamen*.

Two qualifications are offered within the third cycle:

1. *Licentiatexamen* (Licentiate) requires at least 120 credits including a thesis of at least 60 credits. The corresponding degree in fine, applied and performing arts is *konstnärlig licentiatexamen*.

The Faculty Board may also decide that a *licentiatexamen* can be awarded as an intermediate degree towards *doktorsexamen*.

2. *Doktorsexamen* (Doctor of Philosophy) requires 240 credits including a thesis of at least 120 credits. The thesis has to be defended publicly. The corresponding degree in fine, applied and performing arts is *konstnärlig doktorsexamen*.

Entry requirements to the third cycle are:

The applicant has to be deemed to have ability to benefit from the education.

And general requirements to the third cycle are:

1. a second cycle degree
2. completed course requirements of at least 240 credits of which 60 credits within the second cycle or
3. equivalent level of knowledge acquired in Sweden or abroad.

Transitional provisions: Rules for admission to the third cycle were changed from 1 July 2007. A person who

met general requirements for admission before 1 July 2007 should be considered as eligible for admission until 30 June 2015. The general entry requirements before 1 July 2007 were a completed undergraduate programme of at least 120 credits (equivalent to 180 higher education credits) or largely equivalent knowledge acquired in some other system in this country or abroad.

**GRADING**

The Higher Education Ordinance states that the following grades may be awarded:

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 or Fail. Others, for example in Law and Engineering, traditionally use scales with several levels – expressed as letters or numbers. ECTS grading have been introduced at several Higher education institutions. No overall grade is given for a degree and students are not ranked.

**THE SWEDISH HIGHER EDUCATION SYSTEM HSVFS 2007:5**

