

Official Transcript of Record

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|--------------------------|---------------|---------------------|
| Name | Date of birth | Date of issue |
| Christopher Graae | 730822-9231 | 28th February, 1996 |

has, in accordance with the Higher Education Ordinance (SFS 1977:263), fulfilled the requirements for University Certificate (U.C.) in Computer Engineering, Specialization in Energy and Processing and has passed the following courses at Gävle-Sandviken University College:

| Subject | Points | Grade* | Date |
|-----------------------------------|--------|--------------------|------------|
| Calculus I | 3 | Four | 1992-12-18 |
| Calculus II | 4 | Three | 1993-03-15 |
| Calculus III | 4 | Three | 1994-01-11 |
| Statistical Theory | 6 | Three | 1994-06-14 |
| Linear Algebra | 3 | Four | 1992-10-19 |
| Basic Course in Electrics | 4 | Four | 1993-03-09 |
| Electronics | 3 | Three | 1993-06-08 |
| Digital Technology | 4 | Three | 1993-05-24 |
| Transform Methods | 2 | Three | 1994-01-13 |
| Communication | 2 | Pass ¹⁾ | 1992-12-14 |
| Introduction To Computer Science | 3 | Five | 1993-05-04 |
| Computer Science and Programming | 7 | Pass ¹⁾ | 1995-06-08 |
| Utility Soft Ware | 3 | Three | 1994-03-28 |
| Systems Design | 5 | Three | 1993-05-22 |
| Human - Computer Interaction | 2 | Three | 1994-02-21 |
| Introduction to Process Technique | 2 | Three | 1992-10-23 |
| Control and Regulation Theory | 5 | Three | 1993-11-08 |
| Process Technique | 11 | Four | 1995-03-14 |
| Work Practice | - | Pass ¹⁾ | 1993-08-06 |
| Diploma Work | 8 | Pass ¹⁾ | 1995-01-02 |

GÄVLE-SANDVIKEN UNIVERSITY COLLEGE

Ebbe Britta Taets

College official

*) Grade: Pass and High Pass or
Three (Average Achievement), Four (above Average) and Five (Considerably above Average).

1) The highest grade given is Pass.

Please turn over.

GENERAL INFORMATION

The latest reform of higher education in Sweden took effect on July 1, 1977. The new organization, HÖGSKOLAN, comprises traditional university education as well as a number of formerly independent programs of education.

UNDERGRADUATE EDUCATION

Studies are based on a system of "points" with one point approximately corresponding to one week's study. The courses are at different levels: introductory level is the first term of study, intermediate level is the second and advanced level is the third level. Most courses last for one term (=five months) and yield 20 points. Some courses can last for shorter time and yield for instance 5 or 10 points. In some subjects introductory and intermediate courses are combined into a course of 40 points, lasting for two terms. Students sit for several examinations each term. Normally, only one complete 20 points course is taken during one semester.

The object of undergraduate education is to train the student for professional work. Accordingly, higher education is divided into five professional 'sectors':

- 1 Education for Technical Professions
- 2 Education for Administrative, Economic and Social Work Professions
- 3 Education for Medical and Para-Medical Professions
- 4 Education for Teaching Professions
- 5 Education for Information, Communication and Cultural Professions

Program

Each sector holds a number of general programs, designed to train students for certain professions or fields of work. The Government decides what general programs are to be offered. The length of the programs varies between 40 and 220 points, but most of them comprise 120 points or more.

There are also local programs. Local programs are set up by different higher-education institutions independently. Local programs comprise at least 60 points. A supplementary program is founded on a general program and is intended to provide specialized or broadened professional training.

Programs are subdivided into a number of courses. Within most programs the student concentrates in one at a time.

Singel courses

A student can also take singel courses. The purpose of such courses is often to provide continued or specialized education in a particular field. Singel courses rarely exceed 20 points. Many singel courses are identical with courses within programs.

Degrees

A student who has passed all courses (and fulfilled all other requirements, e.g. practical work) within a program, is awarded a certificate or a degree. Also, a degree may be awarded to a student who has completed singel courses with a total of at least 120 points, provided that the combination of courses renders the student eligible for admission to post-graduate studies.

There are official translations of all names of degrees. The English names appear on the original Swedish degree documents, UTBILDNINGSBEVIS. The following general principles apply to the English translation:

- 1 In the case of programs of less than 120 points the Swedish degree is translated as "University Certificate".
- 2 "Degree" of Bachelor of Arts/Science/Education/Fine Arts" is used in the case of programs of at least 120 but less than 160 points.
- 3 "Master of Arts/Science/Fine Arts" is used in the case of programs of at least 160 points.

POSTGRADUATE EDUCATION

Anyone who has completed a program of at least 80 points meets the general requirements for admission to post-graduate studies. In addition to that, the student must meet special requirement pertaining to his major subject. In most cases, he must have completed courses of at least 60 points in that subject. Sometimes there are also minor subject requirements.

For the doctor's degree the student must complete graduate courses-usually 80 points - and write a dissertation which is to be defended at a public disputation.