

APOSTILLE

(Convention de La Haye du 5 octobre 1961)

1. Riik / Country Estonia
Selle avaliku dokumendi / This public document
 2. on allkirjastanud / has been signed by
Ennu Rüsten
 3. ametikoht / acting in the capacity of
Dean of the Faculty of Information Technology
 4. kinnitatud pitsati- / templijäljendiga/
bears the seal / stamp of
Tallinn University of Technology
- Kinnitatud / Certified
5. Kus / at Tallinn
 6. Millal / the 06.04.2005
 7. Kelle poolt / by Ene Ritso, Head of Tallinn Office
 8. Nr / No 1375
 9. Pitsatijäljend / Seal
 10. Allkiri / Signature Ene Ritso



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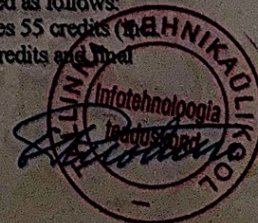
(credits).

3.3. Access requirements: Secondary school education (*gümnaasiumi lõputunnistus*) or equivalent level of education.

4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1. Mode of study: Full-time

4.2. Programme requirements: A student is eligible to receive a *bakalaureusekraad* upon successful completion of 160 credits, and defence of final thesis. The 160 credits must be distributed as follows: general and basic studies 80 credits (incl. electives a minimum 10 credits), special studies 55 credits (incl. electives a minimum 10 credits), free choice courses 6-7 credits, practical training 3-4 credits and final thesis 15 credits.



TALLINNA TEHNIKAÜLIKOOL

Tallinn Technical University

DIPLOMA SUPPLEMENT (valid with diploma No BB006691)

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. 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: Rodina
1.2. Given name: Anastassia
1.3. Date of birth: 23.06.1981
1.4. Student identification number or code: 48106232221

2. INFORMATION IDENTIFYING THE QUALIFICATION

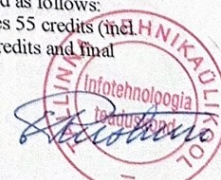
- 2.1. Name of the qualification and title conferred (in original language): *tehnikateaduste bakalaureuse kraad*
2.2. Main field(s) of study for the qualification: electronics and biomedical engineering
2.3. Name and status of awarding institution: Tallinna Tehnikaülikool, public university
2.4. Type of institution: University
2.5. Language of instruction/examination: Estonian

3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

- 3.1. Level of qualification: First stage of higher education.
3.2. Official length of programme: 4 year full-time study; total student effort is equal to 160 credit points (credits).
3.3. Access requirements: Secondary school education (*gümnaasiumi lõputunnistus*) or equivalent level of education.

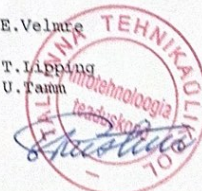
4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

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4.3. Programme details:

Subject code	Subject	Credits	Grade	Date	Name of instructor
VEV3920	Environmental Protection	2.5	A	16.12.1999	Virumaa College
VEV1311	English I	2.0	A	16.12.1999	Virumaa College
VEV3051	Informatics	2.5	A	17.12.1999	Virumaa College
VEV3071	Physics I - laboratory	1.0	A	21.12.1999	Virumaa College
VEV3031	Linear Algebra	3.5	5	08.01.2000	Virumaa College
VEV3060	Physics I	3.0	4	15.01.2000	Virumaa College
VEV3047	Mathematical Analysis I	3.5	5	19.01.2000	Virumaa College
VEV3103	Discrete Mathematics	3.5	5	22.01.2000	Virumaa College
VEV3120	Probability Theory	2.0	5	20.03.2000	Virumaa College
VEV3506	Course of good feeling	1.0	A	23.03.2000	Virumaa College
VEV3072	Physics II - laboratory	1.0	A	11.05.2000	Virumaa College
VEV3590	Grounds of Law	2.5	A	16.05.2000	Virumaa College
VEV1110	Physical Education	1.0	A	16.05.2000	Virumaa College
VEV1312	English II	2.0	A	17.05.2000	Virumaa College
VEV3093	Basic Economics	2.0	5	22.05.2000	Virumaa College
VEV3048	Mathematical Analysis II	3.5	5	26.05.2000	Virumaa College
VEV3162	Informatics	2.5	5	29.05.2000	Virumaa College
VEV3230	Philosophy	1.5	5	02.06.2000	Virumaa College
VEV3068	Physics II	3.0	5	06.06.2000	Virumaa College
IRT3930	Telecommunication	3.5	3	18.01.2001	A.Ots
HLI3043	English	2.0	A	18.01.2001	E.Tiits
YMR4720	Probability theory and mathematical statistics	4.0	4	19.01.2001	S.Babitšenko
HHF5400	Logic	1.5	A	19.01.2001	L.Näpinen
TMT3810	Science of risk and safety	2.5	A	22.01.2001	Ü.Kristjuhan
UTT3011	Organization of studies	0.0	A	22.01.2001	A.Annus
IDU3530	Introduction to information systems	2.5	A	22.01.2001	K.Rava
LAC5100	Circuits, systems, signals	4.0	4	22.01.2001	V.Kukk
HLI3044	English	0.0	3	24.05.2001	E.Tiits
LBR5010	Electromagnetic fields and waves	3.5	3	31.05.2001	H.Hinrikus
HPH3800	Communicational psychology	2.5	A	01.06.2001	A.Samarin
LEA3020	Electronics	3.5	4	05.06.2001	U.Tamm
LAV3730	Engineering measurements	2.5	A	08.06.2001	R.Jäers
LAV3750	Basics of human communication	1.5	5	08.06.2001	R.Paluoja
IAF3011	Computers I	3.5	3	12.09.2001	T.Evartson
LAP5711	Introduction to real-time software engineering	3.5	2	09.01.2002	L.Mõtus
LBB5010	Microwave and optical engineering	3.5	3	15.01.2002	K.Meigas
LBB5030	Medical imaging systems	3.5	5	18.01.2002	J.Riipulk
LED5020	Sensorics and microsystems technology (MST)	3.5	3	21.01.2002	T.Rang
LAV3740	Engineering ethics	1.5	A	24.01.2002	B.Gordon
LEM5010	Biomedical electronics	4.0	4	30.05.2002	M.Min
LBR5060	Principles of physiology and central nervous system	3.0	5	06.06.2002	V.Tuulik
LAP3731	Computer networks	3.5	1	11.06.2002	R.Paluoja
LEM5000	Data acquisition and measurement systems	4.0	5	11.06.2002	M.Min
LBR5040	Signal processing	3.5	4	12.06.2002	J.Lass
LBB5100	Biomedical engineering - project	4.0	5	14.06.2002	K.Meigas
LBR5020	Bioelectromagnetism	4.0	5	14.06.2002	H.Hinrikus
TET3080	Macroeconomics	2.5	5	14.06.2002	R.Rajamäe
LBB5020	Biomedical instrumentation	4.0	5	07.01.2003	K.Meigas
LBR5030	Electromagnetic radiation in biological media	4.0	4	10.01.2003	H.Hinrikus
LEA3000	Principles of electronic components	3.0	2	15.01.2003	E.Velme
LBR5050	Medical signal processing	3.0	4	18.01.2003	T.Lippang
LEA5000	Electronic circuits	3.5	5	22.01.2003	U.Tamm



LED372P	Practical training	3.0	A	29.01.2003	H.Hinrikus
LED5000	System design and technology	4.0	4	24.04.2003	T.Rang
HSK3032	Physical education	1.0	A	03.06.2003	A.Voltri
LAS5711	System theory I	3.5	3	13.06.2003	E.Rüstern

Bakalaureus thesis

YBR34LT	Effects of modulated microwave on visual perception	15.0	5	10.06.2003	
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Total credits: 168.5

Weighted average grade: 4.19

4.4. Grading scheme: All courses must end with an examination or a preliminary examination. The positive grades on the six-point scale used are

5 – excellent – 91 – 100%

4 – very good – 81 – 90%

3 – good – 71 – 80%

2 – satisfactory – 61 – 70%

1 – sufficient – 51 – 60%

The negative grade is

0 – fail – 0 – 50%

A preliminary examination may be expressed as a grade or as

A – assessed (passed); M – fail.

4.5. Overall classification of the award (in original language): -

5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1. Access to further studies: Access to *magister*-level study

5.2. Professional status (if applicable): No special information is indicated; gives access to employment.

6. ADDITIONAL INFORMATION

6.1. Additional information: The study programme has been accredited by the Estonian Higher Education Quality Assessment Council at 14.06.1999.

6.2. Further information sources:

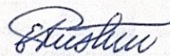
Department of Academic Affairs
Tallinn Technical University
Ehitajate tee 5, 19086 Tallinn
Estonia
Phone: 6203511

Academic Recognition Information Centre
The Estonian ENIC/NARIC
Kohtu 6, 10130 Tallinn
Estonia

7. CERTIFICATION OF THE SUPPLEMENT

7.1. Date: 21.10.2003

7.2. Signature:



Ennu Rüstern

7.4. Official seal:

7.3. Capacity: Dean of the Faculty of Information Technology

7.5. Registration number: I-56

8. INFORMATION ON THE HIGHER EDUCATION SYSTEM

1. Admission requirements



and specific requirements giving access to higher education are established according to the legislation of the Republic of Estonia. General requirements, binding to all higher education institutions and study programmes, are approved by the Ministry of Education.

The general admission requirement for higher education studies is the *gümnaasiumi lõputunnistus* (secondary school leaving certificate) or an equivalent recognised qualification attesting the completion of education at secondary level. The *gümnaasiumi lõputunnistus* is awarded after 12 years of study, including 9 years of basic education and 3 years of secondary education. Since 1997 the secondary school students must pass the state examinations administered by the State Examination and Qualification Centre to obtain secondary education.

Specific requirements depend on the higher education institution and on the field of study. Specific requirements may include a number of entrance examinations, grades on the *Riigieksaminnistus* (State Examination Certificate) and on the secondary level school leaving certificate.

2. General overview of the higher education system

The Estonian higher education system is binary and consists of universities (*ülikool*) and applied higher education institutions (*rakenduskõrgkool*). The system also incorporates some vocational higher education (*kutsekõrgharidus*) programmes at post-secondary vocational institutions (*kutseõppeasutus*). The higher education institutions can be state, public or private institutions. The administration of higher education establishments is the responsibility of the Ministry of Education. The administration of higher education University is an institution of learning, culture and research in which a student may acquire the academic qualifications of higher education. It is also possible to obtain applied higher education at universities.

The *rakenduskõrgkool* and *kutseõppeasutus* are institutions the purpose of which is to guarantee non-academic higher education and to impart professional skills and abilities.

The right to award the applicable diploma or degree lies with the state *rakenduskõrgkool*, state *kutseõppeasutus* and the public university recognised by the state. Diplomas awarded by the private higher education institutions are recognised after the accreditation. According to the Law on Private Schools (1998), diplomas awarded up to two years before the accreditation decision shall be recognised by the state.

3. Organisation of a course of study

The academic year at higher education institutions is divided into two semesters: the autumn and spring semester. The academic year begins in September and ends in the first half of June. In general, it contains 40 weeks of lectures, seminars, practical training and two examination periods.

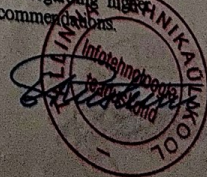
The capacity of studies is measured in credits (*ainepunkt*). One credit corresponds to forty hours (one study week) of studies performed by a student in whatever way. The nominal academic year consists of 40 credits (60 ECTS credits).

General requirements for studying and teaching are set by the Standard of Higher Education (SHE). The SHE is adopted by the Government and regulates all stages of higher education.

4. Accreditation

According to the Law on Universities, all study programmes in universities must be evaluated and accredited once every seven years. This applies also to *rakenduskõrgkool*. The accreditation of study programmes is granted by the Higher Education Quality Assessment Council (HEQAC). The HEQAC forms evaluation committees. HEQAC makes accreditation decisions and proposals regarding higher education institutions and their operation on the basis of the evaluation committee's recommendations.

5. Description of national higher education awards



5.1. Non-academic higher education qualifications

Vocational higher education diploma

Vocational higher education is a one-stage higher education offered by secondary education based vocational education institution (*kutseõppeasutus*) or *rakenduskõrgkool*. The length of study is from three to four years, the total capacity of studies being 120 – 160 credits (180 – 240 ECTS credits). Vocational higher education programme includes practical training, accounting for at least 35% of the total capacity. The graduates who have completed their studies are awarded a diploma with indication of their speciality.

Diplom

Diplom-study is a one-stage non-academic applied higher education. The length of study is from three to four years, the total capacity of studies being 120 – 160 credits (180 – 240 ECTS credits). *Diplom*-study is a specialised higher education study, consisting of studying and acquisition of practical knowledge and skills. The acquisition of practical professional and working skills, including training, must have a total capacity of not less than 10 credits (15 ECTS credits). The graduates who have completed their studies will be awarded a *diplom* (with no academic degree).

Diplom-study can be performed at universities and *rakenduskõrgkool*. The study programme of *diplom*-study at university and that of *bakalaureus*-study may have a common part.

5.2. Academic higher education qualifications

Bakalaureusekraad

Bakalaureus-level study is the first stage of academic study, the main purpose of which is to increase students' level of general education and develop theoretical knowledge and professional skills for the selected area of employment and further study. The *bakalaureus*-level study is conducted in universities, and the length of study is 3 – 4 years (up to 1999 – 4 years). In some fields of study the duration may be longer (5 years). The *bakalaureus*-study is a theory-based wide-range study. Research, professional or creative work, including final thesis, shall have a capacity of not less than 20 credits (30 ECTS credits). The graduates who have completed their studies will receive a diploma, certifying the obtained *bakalaureusekraad*.

Magistrikraad

Magister-level study is the second stage of academic study, the main purpose of which is to deepen theoretical and specialist knowledge and develop proficiency in research, professional or other creative work for individual use of knowledge and skills. Admission requirement is the *bakalaureusekraad* or an equivalent level of academic education. The length of study is 1 – 2 years (up to 1999 – 2 years), but together with the *bakalaureus*-study not less than 5 years. The study will be completed with the defence of a thesis. The degrees are divided into research and professional degrees. The graduates who have completed their studies will receive a diploma, certifying the obtained *magistrikraad*.

Doktorikraad

Doktor-study is the third stage of academic study, consisting of comprehensive research, professional or other creative work and related studies. Admission requirement for *doktor*-study is the *magistrikraad* or an equivalent level of academic education. The nominal length of study is four years. The degrees are divided into research and professional degrees. The graduates who have completed their studies will receive a diploma, certifying the acquired *doktorikraad*.

