STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

KAUNO TECHNOLOGIJOS UNIVERSITETO

NUOTOLINIO MOKYMOSI INFORMACINIŲ TECHNOLOGIJŲ PROGRAMOS (621E14002)

VERTINIMO IŠVADOS

EVALUATION REPORT

OF *INFORMATION TECHNOLOGIES OF DISTANCE EDUCATION* (621E14002)

STUDY PROGRAMME

AT KAUNAS UNIVERSITY OF TECHNOLOGY

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Išvados parengtos anglų kalba
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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	**Nuotolinio mokymosi informacinės technologijos**
Valstybinis kodas	621E14002
Studijų sritis	Technologijos mokslai
Studijų kryptis	Informatikos inžinerija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Antroji
Studijų forma (trukmė metais)	Nuolatinė (2)
Studijų programos apimtis kreditais	120
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Informacinių technologijų magistras
Studijų programos įregistravimo data	Švietimo ir mokslo ministro įsakymas, Nr. ISAK-225, 2007-02-19

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	**Information Technologies of Distance Education**
State code	621E14002
Study area	Technological Sciences
Study field	Informatics Engineering
Kind of the study programme	University studies
Level of studies	Second
Study mode (length in years)	Full-time (2)
Scope of the study programme in credits	120
Degree and (or) professional qualifications awarded	Master of Information Technologies
Date of registration of the study programme	19-02-2007, Order No. 225 of the Minister of Education and Science of the Republic of Lithuania

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The Centre for Quality Assessment in Higher Education

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I. INTRODUCTION

The Lithuanian Centre for Quality Assessment in Higher Education has invited four independent experts and one representative of students (hereinafter called Expert Team) from Estonia, Latvia, and Lithuania, to review and assess the higher education second cycle study (Master) programme *INFORMATION TECHNOLOGIES OF DISTANCE EDUCATION* (state code 621E14002, informatics engineering study field) at the Kaunas University of Technology (KTU) in cooperation with Vilnius Gediminas Technical University (hereinafter VGTU). The full-time study programme (further Programme) is arranged by KTU Faculty of Informatics, coordinated and conducted by the Department of Software Engineering (further Department, DSE) with the help of teachers from other departments and VGTU.

The Expert Team visited the Faculty on October 2-4, 2012[1].
On October 2, the Expert Team met the administrative staff (8) of the Faculty represented by the Dean, three Deputy Deans, and the Heads of Software Engineering, Information Systems, Business Informatics and Computer Science departments. General issues, such as Faculty structure, financing scheme, quality management, web-site structure, promotion of study programmes were discussed.

All other activities during the visit were scheduled for October 3, except observation of various support services (class rooms, computer services, library), which took place on October 4.

On October 3, a meeting with staff (4) responsible for preparation of the Self-Analysis Report was conducted. At this meeting, the Expert Team was given clear and exhaustive answers to the questions concerning less uncovered in the self-assessment report issues. After that, a meeting with 5 members of teaching staff of the Programme took place.

The Expert Team conducted also interviews with some students. The group consisted of 5 students, among them 4 2nd-year undergraduates and 1 first-year undegraduate student. The Expert Team was familiarized with students' attitude towards the Programme; the students expressed mostly positive opinions about the Programme. The Expert Team had possibility to familiarize with students' final works. Finally, in separate meetings, the Expert Team met 3 graduates and 6 social partners (incl. President of Association for Distance Education). The graduates as well as the social partners expressed positive attitudes about the Programme.

At the conclusion of the visit, the Expert Team conducted a meeting with staff of the Faculty and introduced general remarks of the visit and highlighted some strengths and weaknesses of the programme under review.

[1] During this period (October 2-4) the Expert Team had actually a joint visit concering also 4 other study programmes at the Faculty. Some of the meetings with the Programme stakeholders were performed jointly.

The findings of the Expert Team are reflected in the following. The self-analysis report (further SAR) submitted by Faculty, the observations made at the time of the visit, and the supplementary material received during the visit form the basis of these assessments.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

First of all, the Programme is related to the concept of "life-long learning" in the information society.

The Programme learning outcomes are well defined and clear. They are publicly accessible in KTU web-pages in Lithuanian, but not in English. In these web-pages, the Programme aims are given indirectly, in the form of an annotation of the Programme.

The aims and learning outcomes of the Programme correspond to the *Euro-Inf Framework Standards and Accreditation Criteria for Informatics Degree Programmes*, prepared by the international academic network EQANIE. The specification of the aims and pursued learning outcomes of the programme was discussed with the staff of the Faculty who took part in the conference "Dimensions of Quality Assurance in Informatics Education 2011" on international Informatics studies accreditation in Italy on 22-23 September 2011.

The Programme aims and learning outcomes are well reasoned. They are based on the academic and professional requirements, public needs and the needs of the labour market. The following documents are taken as basis for substantiation of needs and demands:

Strategy for Ensuring Lifelong Learning 2004 of the Republic of Lithuania (the Higher Education Ministries);
Youth on the Move of 2010 (European Commission initiative);
Strategy for Ensuring Lifelong Learning 2008-2013 of the Republic of Lithuania;
Study of the Demand for Distance Education Service Providers (KTU Centre of E-learning Technologies, 2007);
Europe 2020 Strategy of the EU till 2020.

The Programme aims and learning outcomes are consistent with the type and level of studies and the level of qualifications offered.
The name of the Programme, its learning outcomes, content and the qualifications offered are compatible with each other.

2. Curriculum design

The curriculum design meets legal requirements.

Study subjects are spread evenly, their themes are not repetitive.

The content of the subjects is rather good. It is consistent with the type and level of the studies. Though, some more elements of Discrete mathematics would be necessary for students with

weaker informatics background (i.e. for students having insufficient fundamentals in Informatics and Information Technologies).

The content and methods of the subjects are appropriate for the achievement of the intended learning outcomes. The teachers use video conference studios in the Centre of E-learning Technologies, distance learning classrooms and software, developed and installed by KTU, purchased or accessible through different projects.

The scope of the Programme is sufficient to ensure learning outcomes.

The content of the Programme reflects not enough the latest achievements in science and technologies; some subjects need to be adjusted to that end.

3. Staff

The Programme is provided by the staff meeting legal requirements.

The qualifications of the teaching staff are adequate to ensure learning outcomes. Most of the teachers, lecturing in the Programme, have Doctor habilitatus and Doctor of science degrees as well as the required competence. However, one lecturer without a degree is teaching (leading workshops) in this Master's programme. Many teachers participating in the programme have considerable experience in organizing, conducting and maintaining distance studies.

The number of the teaching staff (professors, 6 docents and 3 lectors) is adequate to ensure learning outcomes. Teachers from different departments (Computer Science, Computer Networks, Multimedia Engineering and Software Engineering) work full-time in the Programme. Teaching staff turnover is able to ensure an adequate provision of the Programme. The age average of teachers working in the Programme was 53.5 (professors: 59.7 years, docents: 56.7 years and lectors: 38 years) in 2010-2011.

Conditions for the professional development of the KTU teaching staff necessary for the provision of the Programme are created.

Not all of the teaching staff of the Programme is involved in research directly related to the Programme, i.e. in the field of virtual or distance education.

4. Facilities and learning resources

The premises for studies are adequate both in their size and quality. All lecture rooms are equipped with the necessary furniture and basic didactic material. Projectors and computers for multimedia-based instruction are available.

In general, technical infrastructure is very good. The teaching and learning equipment (laboratory and computer equipment, consumables) are adequate both in size and quality.

The teaching and learning equipment (laboratory and computer equipment, consumables) are adequate both in size and quality. Teachers and students in the Programme can use the material resources of the Lithuanian Distance Education Network LieDM.

Teaching materials (textbooks, books, periodical publications, databases) are adequate and accessible. There are 19 distance courses available prepared by the teachers at KTU Faculty of Informatics. Students can access wireless Internet in the reading rooms of the University library; they can also use electronic catalogues of the Virtual Library of Lithuania, full-text databases, KTU publications database, KTU scientific articles database, patent database and other resources. Oportunities exist to use electronic resources also from other universities‘ libraries, including international data bases. The electronic resourses are directly accessible from the university network and from outside - through VPN (Virtual Private Network).

Remark: Most of the statements above are based on indirect indicators, mainly opinions expressed by students and graduates. As scheduled by the Agenda, there was only one (joint for 5 study programmes) short visit to the library and other facilities. However, as an advantage, the direct link to the rich library of Vilnius Gediminas Technical University should be stressed. On the other hand, the following disadvantage could be mentioned: opening hours of the library are not long enough for students to study, especially on the weekends; the library closes at 7 p.m. on week days, and is closed on weekends.

5. Study process and student assessment

Only the students who have a bachelor’s qualification degree of Technological, Physical or Social Sciences can apply to the studies. Admission to the programme is carried out by KTU and VGTU. However, the admission requirements to the programmes (with the same curricula) are quite different at these partner-institutions.

The Programme is conducted in the form of distance learning. Blackboard Learning System Vista Enterprise, video conferences, VLE Moodle are used. Students mentioned as inconvenience the following issues. Electronic material is scattered over different places (Moodle, separate web-pages); it would be necessary: to have more practical work and individual work; to have more face-to-face contacts with teachers; to reconcile Lithuanian informatics terminology contradictions; to invite outside experts. Going to Vilnius for some courses at VGTU is inconvenient.

It is not clear, are the contact hours (typically 48 per subject, as prescribed by the study plan) ensured.

Master students are offered a possibility to present their research results in several scientific conferences, for example, in the annual KTU conference “Information Technologies”. However, the Expert Team was not given any evidence of taking the chance by the students of this Programme. Indirectly, one can guess that some students of the Programme do publish their research results in scientific conferences, because according to the requirements of KTU Faculty

of Informatics, a master student cannot receive final evaluation "Excellent" if he/she has no published scientific articles or doesn't have an externally approved deployment act for the software product he/she developed.

Students have opportunities to participate in student mobility programmes. During the period under assessment, 8 students visited foreign universities. In turn, 13 students from foreign higher education institutions arrived to the Faculty of Informatics for part-time studies.

The KTU ensures an adequate level of academic and social support.

The assessment system of students' performance is clear, adequate and publicly available.

Professional activities of the majority of graduates meet the Programme providers' expectations.

6. Programme management

Responsibilities for decisions and monitoring of the implementation of the Programme are clearly allocated inside the KTU. However, representatives of the partner-institution (VGTU) are not involved in the Programme management. Composition of the study programmes, including the programme under analysis, selection, update and certification of modules are carried out by the Study Programme Committee.

Information and data on the implementation of the Programme are regularly collected and analysed.

The Programme has been initiated, prepared and monitored by the Study Programme Committee of the Faculty of Informatics, approved by the Rector's order. The structure and content of the programme are annually revised and updated according to the schedule for the preparation for the next academic year. The Committee certifies the study modules renewed by the teachers and divisions on the compulsory basis every three years. After the review and discussion by the Committee, the programmes are submitted to the Council of the Faculty for approval. Moreover, the Committee orders, selects and certifies the subjects for a limited period, i.e. from one to three years, and after the certification period expires, the procedure is repeated. If any doubts concerning the content of the subjects arise (which is demonstrated by the results of the student surveys), they are reviewed, improved and certified in advance.

Requests for updating the study programme, its subjects or change specializations after they had been discussed by the Study Programme Committee of the Faculty must be submitted to the Academic Department for further analysis. At least once or twice a semester, relevant quality issues of the study programme are discussed in the meetings of the Department. After the spring semester and examination session, the quality of study programmes, Final Degree Projects and their defence are analysed in the meetings of the Department, Dean's Office and Council of the Faculty. Teachers are responsible for the update of each subject. The study programmes and re-certified subjects of the next academic year are reviewed and discussed each October-November after collecting the necessary information throughout the year.

Information about how outcomes of external evaluation (in 2003) of the Programme are used for the improvement of the Programme is not available. The evaluation and improvement processes involve stakeholders. The Faculty is very open to suggestions. Social partners have very strong relations with the Programme. Positive changes in the improvement of study quality have been stimulated by external stakeholders who have signed cooperation agreements with the KTU under the initiative of the Department. However, the Expert Team was not given clear explanation about the mechanism how changes in the Programme (e.g. the suggestions from social partners) are managed.

The internal quality assurance measures are rather effective and efficient.

III. RECOMMENDATIONS

1. Consider conflating the Programme with the “partner” programme *Information Technologies of Distance Education* (621E14005) at VGTU, launching a new (really joint) study programme.
2. In case of insurmountable obstacles to start a joint study programme, include representative(s) from VGTU into the Programme management.
3. Specify a list of Programme aims. Make them and the learning outcomes publicly accessible in KTU web-pages in English.
4. Consider introducing more elements of discrete mathematics for students with weaker informatics background.
5. Give more care to software updates.
6. Encourage students to present their research results in scientific conferences for students.
7. Find ways to intensify social communication between students in the Programme.
8. Invite lecturers from abroad.
9. Introduce even more distance education tools in teaching.

IV. SUMMARY

The higher education second cycle study (Master) programme *INFORMATION TECHNOLOGIES OF DISTANCE EDUCATION* (state code 621E14002, Informatics engineering study field) is provided at the Kaunas University of Technology (KTU) in cooperation with Vilnius Gediminas Technical University (VGTU). The full-time study programme is arranged by KTU Faculty of Informatics, coordinated and conducted by the Department of Software Engineering with the help of teachers from other departments and VGTU.

The programme is conducted in the form of distance learning, and provides a possibility for the specialists with informatics or informatics engineering qualification to expand and for others to deepen the knowledge in the application of informatics engineering in distance learning and acquire the necessary skills and abilities. The graduates will be able to work in education institutions, adult training and regional professional training centres, universities and colleges that require specialists capable of organizing distance learning process, design, implement or simply apply and employ the possibilities of IT to support e-learning, arrange training for acquiring or improving qualification at the time, place and speed convenient to the students. In 2011, 9 students have been enrolled.

The most positive aspects are: curriculum design, good relations between teaching staff and students, study materials, international exchanges/relations, implementation of distance learning mode of studies, material resources, use of virtual learning environments, involvement of alumni and social partners.

The issues which could be improved: usage of modern distance teaching methods in all courses, concentration of online resources, involving into study process experts from industry and abroad. Cooperation with the VGTU has not much positive effect. Current informal relations should be given the form of an official joint KTU-VGTU study program. Another option is to move to KTU teaching of the few courses currently delivered at the VGTU.

V. GENERAL ASSESSMENT

The study programme *Information Technologies of Distance Education* (state code – 612E14002) at Kaunas University of Technology is given **positive** evaluation.

Study programme assessment in points by fields of assessment.

No.	Evaluation Area	Evaluation Area in Points*
1.	Programme aims and learning outcomes	3
2.	Curriculum design	4
3.	Staff	3
4.	Material resources	4
5.	Study process and assessment (student admission, study process student support, achievement assessment)	3
6.	Programme management (programme administration, internal quality assurance)	3
	Total:	**20**

*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field develops systematically, has distinctive features;

4 (very good) - the field is exceptionally good.

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