STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

KAUNO TECHNOLOGIJOS UNIVERSITETO

MULTIMEDIJOS TECHNOLOGIJŲ PROGRAMOS (612E14002)

VERTINIMO IŠVADOS

EVALUATION REPORT

OF *MULTIMEDIA TECHNOLOGIES* (612E14002)

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	**Multimedijos technologijos**
Valstybinis kodas	612E14002
Studijų sritis	Technologijos mokslai
Studijų kryptis	Informatikos inžinerija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Pirma
Studijų forma (trukmė metais)	Dieninė (4), ištestinė (6)
Studijų programos apimtis kreditais	240
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Informacinių tehnologijų bakalauras
Studijų programos įregistravimo data	2009-05-04 švietimo ir mokslo ministro įsakymas Nr. ISAK-928

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	**Multimedia Technologies**
State code	612E14002
Study area	Technological Sciences
Study field	Informatics Engineering
Kind of the study programme	University studies
Level of studies	First
Study mode (length in years)	Full-time (4), part-time (6)
Scope of the study programme in credits	240
Degree and (or) professional qualifications awarded	Bachelor of Informatics Engineering
Date of registration of the study programme	May 4, 2009, the order of the Minister of the Ministry of Science and Education of the Republic of Lithuania No. ISAK-928

CONTENT

I. INTRODUCTION

The Informatics Faculty of Kaunas University of Technology (hereinafter - KTU) provides the first-level study programme "Multimedia Technologies" (further – the Programme) in the field of Informatics Engineering. The structure of KTU consists of 13 faculties, Centre for International Studies, Library, 13 Research Institutes, 2 Research Centres, 14 administrative units and 7 support units. The KTU Council, Senate, Rector and University Strategic Planning Committee determine strategic guidelines of KTU activities. Vice-Rector for Studies administers and coordinates the activity related to study issues.

The Programme is being taught for 3 years, there are no previous self-assessments, theses, and graduates.

The Lithuanian Centre for Quality Assessment in Higher Education has invited four experts and one representative of students (hereinafter called Expert Team) from Estonia, Latvia, and Lithuania, to review and assess the Multimedia Technologies university bachelor study programme **(**612E14002**)** at the Kaunas University of Technology. The programme is organized by the Informatics Faculty (hereinafter called Faculty), Department of Multimedia Engineering. Institutional structure of KTU enables to involve required teachers from all the faculties and departments of KTU.

The Expert Team visited the Faculty on October 4, 2012.

First, the Expert Team met the administrative staff of the Faculty.

Next at the meeting with staff (4 persons) responsible for preparation of self-assessment the Expert Team was given good clear and exhaustive answers to the questions concerning less uncovered in the self-assessment report issues.

After that, a meeting with 16 members of teaching staff took place.

The Expert Team conducted also interviews with some students. The group consisted of 23 students, among them 8 4th year undergraduate, 6 3rd year undergarduate, 5 2nd-year undegraduate, and 4 1st-year undergraduate student. The Expert Team was familiarized with students' attitude towards the programme; the students expressed mostly positive opinions about

the study programme: community feeling, great software, helpful and communicable teachers, freedom of choosing tasks, facilities, library, start-up space, where they can experiment in establishing their own companies, etc. However, they want to become multimedia professionals, not an informatics engineers, so specific engineering subjects are not useful for them. There were signs of restricted communication students to administration of the Programme.

The Expert Team had possibility to observe various support services (class rooms, computer services, library) as well as to familiarize with students' final works.

Finally the Expert Team met potential future employers of the students (5 persons). They expressed a positive attitude about the study programme. However, they mentioned that more different graphics tools would be needed. Four of the employers provide internships.

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

The findings of the Expert Team are reflected in the following. The self-assessment report (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

The programme aims and learning outcomes are rather richly defined, albeit their relationship is not presented with certainty, and are publicly accessible (see http://uais.cr.ktu.lt/plsql/mod_dest/stp_report_ects.card_ml?p_valkod=612E14002&p_year=2012&p_lang=LT). According to the self-assessment report, programme's learning outcomes are derived from the international industrial consortium's project *Career Space* recommendations. However, mapping from the programme's learning outcomes (par. 23 of SAR) to that of the *Career Space* is not presented. Regulation of Engineering Sciences (par. 24 of SAR) are not presented explicitely as a document used in formulation of learning outcomes and curriculum design. In fact, SAR contains three separate sets of learning outcomes – par. 16, Table 2, and par. 23. Mappings between these sets partly are given in Appendix 2. However, learning outcomes

included in course descriptions differ from those mentioned above. It is questionnable that program‘s aims are formulated just as another set of learning outcomes (Table 2 in SAR).

The programme aims and learning outcomes are based on the academic and/or professional requirements, public needs and the needs of the labour market (see par 28 of SAR).

The programme aims and learning outcomes generally are consistent with the type and level of studies and the level of qualifications offered. However, relationship between learning outcomes of individual course descriptions, learning outcomes of the programme, and learning outcomes of international recommendations (*Career Space*, The Qualifications Framework for the European Higher Education Area) is rather chaotic (see comments above). Learning outcomes of any study course should contribute to some learning outcome(s) of the program, and should be showed with certainty.

The name of the programme, its learning outcomes, content and the qualifications offered are generally compatible with each other.

2. Curriculum design

To the best of the Expert Team’s knowledge, the curriculum design meets legal requirements.

Study subjects and/or modules are spread evenly, their themes, seemingly, are not repetitive. Unfortunately, course descriptions not always contain information in the field “Prerequisites”, so it is hard to obtain needed sequence of learning themes. General subjects (Mathematics, Physics, Philosophy) are not tailored to the programme, too general. Teachers of speciality subjects would like to see more practical examples in general study subjects (e.g. Furie transform related to sound processing problems). Students and social partners wish more multimedia subjects in the curriculum, more specific multimedia knowledge.

Course projects must be scheduled after respective subject lectures that is not the case.

The content of the subjects and/or modules is consistent with the type and level of the studies. However, volume of only one semester is devoted for specialization in multimedia technologies; otherwise it is a quite general informatics programme. Social partners mention practice with Apple computers, mobile platforms as skills needed from such specialists in the market. Students

in practice or working for them mention, that they learned mathematics, but don't know where to apply this in practice.

The content and methods of the subjects/modules are generally appropriate for the achievement of the intended learning outcomes. The following study methods and forms are applied: 1) Lectures - to achieve results of fundamental Informatics studies. 2) Workshops, programs, systems using the latest technologies,participation in individual and group projects, individual counseling, self-employment, information technology tasks - to achieve analysis, design and implementation study results. 3) Individual or group work on systems design - to achieve technological and methodological skills.However, vision of teachers, mainly engineers, dramatically differs from that of students that mainly considers themselves as multimedia designers, even artists.

The scope of the programme is generally sufficient to ensure learning outcomes. However, results will be seen only after first graduates.

The content of the programme generally reflects the latest achievements in science and technologies, especially in specialisation courses. In general, research is carried out by teachers, related to the subjects they teach. However, we were given evidence about only one project in the field of multimedia (projects are not desribed in SAR).

3. Staff

The study programme is provided by the staff meeting legal requirements.

The qualifications of the teaching staff (12 professors, 15 associate professors and 8 lecturers) are adequate to ensure learning outcomes. However, there is rather weak academic exchange with foreign universities – 2 teachers in 2 years, 3 in 5 years; rather poor English for the staff; too few younger teachers (average age is 54, only 4 in age group 30-40), looking at the future of the programme.

The number of the teaching staff (35, also teaching in other programs) is adequate to ensure learning outcomes.

Teaching staff turnover is able to ensure an adequate provision of the programme. There were no change of teachers in the analyzed programme in 2009-2011.

The higher education institution creates conditions for the professional development of the teaching staff necessary for the provision of the programme. According to SAR, the employees of the department have good conditions for their pedagogical work as well as the possibility to take part in different research projects and to improve qualification of themselves: to prepare and defend their scientific works to get a qualification, to write and publish course books and monographs, to work on probation at foreign universities and research centres or otherwise to improve one's professional qualification. Thus the staff is motivated enough, and the essential changes in the staff do not take place. However, there ias at least 1 teacher over 50 having no doctoral degree.

The teaching staff of the programme is involved in research directly related to the study programme being reviewed. However, majority of teachers does not do research in the field of multimedia.

4. Facilities and learning resources

The premises for studies are adequate both in their size and quality. When implementing the study programme, auditoriums of the Faculty of Informatics (Studentust. 50) are used. Theoretical and practical training classes take place in computerised auditoriums (Rooms 512, 518 or 101). Practical classes are conducted in the Institute of Information Technology Laboratories (B305, B308, room 103., 48 computers and a laser printer are connected to the LAN and the Internet). All Departments possess notebook computers, digital video projectors, a video camera; so the teachers have all necessary technical media to work effectively and successfully.

The teaching and learning equipment (laboratory and computer equipment, consumables) are generally adequate both in size and quality. However, rather poor infrastructure for multimedia speciality subjects - only 5 Adobe Suite workplaces, no specific multimedia hardware. Though we were told, that laboratories are planned in the projects, e.g. TV media lab together with Informatics Engineering.

Seems that the higher education institution has adequate arrangements for students' practice due to established contacts with industrial partners (WebMedia, Net Frequency, Telesoftas, Ito, LRT, LNK, Unity Technologies). Final 12 weeks long practice is scheduled in the 8th semester. No students have passed this practice yet.

Teaching materials (textbooks, books, periodical publications, databases) are adequate and accessible. However, electronic material scattered over different places (Moodle, separate webpages). Students mention it as inconvenience.

5. Study process and student assessment

The admission requirements are well-founded. The detailed information about the programme and the rules of the admission to the first-level programmes is announced on the University website (http://ktu.lt/turinys/pirmosios-pakoposbakalauro-studijos).

The organisation of the study process ensures an adequate provision of the programme and the achievement of the learning outcomes. However, we have seen rather poor shape of student course papers - many of them contain no introduction, no analysis, no conclusions - just several pages with printed pictures.

Students are encouraged to participate in research, and applied research activities.

Students have opportunities to participate in student mobility programmes because the University participates in ERASMUS. However, SAR does not contain any information.

The higher education institution ensures an adequate level of academic and social support. The support is described in details in pars 95-108 of SAR.

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

6. Programme management

Responsibilities for decisions and monitoring of the implementation of the programme are clearly allocated.

Information and data on the implementation of the programme are regularly collected and analysed. The Programme structure and curriculum are annually reviewed but not essentially renewed according to the University academic calendar for the next academic year scheduled by the Vice-rector for studies and the Study Service; the SPC acreditates the study subjects that are obligatory renewed by coordinating teachers and departments every three years. The programmes after their revision and discussion at the Committee are presented to the Board of

the Faculty to confirm them annually. The Study Programme Committee orders, selects and accreditates subjects. The subjects are accredited for a limited period – from one to three years. When the accreditation period ends, the subjects are accredited anew if any doubts for the subjects'content (the results of the performed students'survey show this) emerge; the subjects are reviewed, improved and re-accredited beforehand.

The outcomes of internal and external evaluations of the programme are used for the improvement of the programme. Once in a year the ongoing quality issues of the Multimedia Engineering study programme, quality of the final works, subjects of study and learning outcomes are discussed in meetings of Department of Multimedia Engineering. At the end of a school year, educational programs, theses and their defence quality are analyzed in the department and faculty committee meetings. The evaluation and improvement processes involve stakeholders. However, social partners were participating 3 years ago, when designing the programme. Rather week contacts over the last 3 years.

The internal quality assurance measures are effective and efficient. When assessing the quality of study programmes and renewing them, Study Programme Committee take into account the survey results. The tendency of rating growth is evident – thus this assessment improves the quality of teachers work. On the University website a teacher, using his / her password, can see the assessment of his / her subject as well as its strengths and weaknesses as well as suggestions expressed by students during the survey. During the first lecture of their subject teachers are asked not only to present the information about the didactic system of their delivered subject(s), but also to discuss the assessment of the subject by previous students and to comment the remarks and suggestions expressed by previous students, to discuss the improvements made on the subject.

III. REKOMENDACIJOS

1. Suderinti studijų programos ir dalykų rezultatus. Būtų naudinga laikytis EQANIE/Career Space ir kt. rekomendacijų formuluojant studijų rezultatus.
2. Sustiprinti informatikos poveikį.
3. Vykdyti daugiau tyrimų multimedijos technologijų srityje.

IV. SANTRAUKA

Kauno technologijos universitetas aktyviai remia ir įgyvendina pagrindinius strateginius greitai tobulėjančios žinių visuomenės reikalavimus.

Kauno technologijos universiteto *Multimedijos Technologijų* bakalaurai yra rengiami nuo 2009 m. Įvertintos *Multimedijų technologijų* studijų programos tikslai ir studijų rezultatai skiriasi nuo kitų panašių programų, nes ji yra tikslingai orientuota į multimedijos ir informacinių technologijų sąsajos ir multimedijos technologijų supratimą, video ir audio apdorojimo metodus (ir t. t.) multimedijos sistemose, šiuolaikiniuose video žaidimuose, interaktyviajame tinkle ir mobiliosiose sistemose.

Pagrindinė programos problema yra dramatiškai skirtinga dėstytojų ir studentų vizija. KTU, būdamas inžinerijos universitetu, išryškina inžinerijos žinias ir įgūdžius (ypatingai pirmus dvejus metus), kai tuo tarpu studentai nori tapti multimedijos dizaineriais, meno žmonėmis.

Programos tikslai ir studijų rezultatai yra gana atsargiai plėtojami.

Personalo kvalifikacija ir praktinė patirtis yra pakankama programos vykdymui. Programai trūksta dėstytojų, kurie yra ir inžinieriai, ir menininkai (žinoma, tokios asmenybės yra gana retos).

KTU turi gerą infrastruktūrą, bibliotekoje gausu profesionalios literatūros. Įvairesni multimedijos dizaino įrankiai būtų naudingi.

Studijų proceso organizavimas yra geras, nors studentų dalyvavimas tarptautiniuose mainuose, įtraukimas į tyrimo veiklas ir elektroninės mokymosi aplinkos naudojimas galėtų būti praplėstas.

Studijų programos valdymas ir kokybės užtikrinimo sistema veikia. Tačiau galėtų būti patobulinta kokybės sistema, ypatingai dėl studentų ir socialinių partnerių atsiliepimų įtraukimo.

V. GENERAL ASSESSMENT

The study programme *Multimedia Technologies* (state code – 612E140002) 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	2
2.	Curriculum design	3
3.	Staff	3
4.	Material resources	3
5.	Study process and assessment (student admission, study process student support, achievement assessment)	4
6.	Programme management (programme administration, internal quality assurance)	3
	Total:	**18**

*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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