STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

KAUNO TECHNOLOGIJOS UNIVERSITETO
STUDIJŲ PROGRAMOS *Muzikos technologijos*
(valstybinis kodas – 612W37001)
VERTINIMO IŠVADOS
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EVALUATION REPORT
OF *Music technologies* (*state code - 612W37001*)
STUDY PROGRAMME
at Kaunas University of Technology

Experts' team:

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Išvados parengtos anglų kalba
Report language – English

Vilnius
2015

DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	*Muzikos technologijos*
Valstybinis kodas	612W37001
Studijų sritis	Menai
Studijų kryptis	Muzika
Studijų programos rūšis	Universitetinė
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	Nuolatinė (4), ištęstinė (6)
Studijų programos apimtis kreditais	240 ECTS
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Muzikos technologijų ir industrijos bakalauras
Studijų programos įregistravimo data	2003 05 29, Nr. Įsak. 763.

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INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	*Music technologies*
State code	612W37001
Study area	Creative Arts and Design
Study field	Music
Type of the study programme	University
Study cycle	First
Study mode (length in years)	Full-time (4), part-time (6)
Volume of the study programme in credits	240 ECTS
Degree and (or) professional qualifications awarded	Bachelor of Music Technologies and Industry
Date of registration of the study programme	29th May, 2003, No. 763

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I. INTRODUCTION

1.1. Background of the evaluation process

The evaluation of on-going study programmes is based on the **Methodology for evaluation of Higher Education study programmes,** approved by Order No 1-01-162 of 20 December 2010 of the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC).

The evaluation is intended to help higher education institutions to constantly improve their study programmes and to inform the public about the quality of studies.

The evaluation process consists of the main following stages: *1) self-evaluation and self-evaluation report prepared by Higher Education Institution (hereafter – HEI); 2) visit of the review team at the higher education institution; 3) production of the evaluation report by the review team and its publication; 4) follow-up activities.*

On the basis of external evaluation report of the study programme SKVC takes a decision to accredit study programme either for 6 years or for 3 years. If the programme evaluation is negative such a programme is not accredited.

The programme is **accredited for 6 years** if all evaluation areas are evaluated as "very good" (4 points) or "good" (3 points).

The programme is **accredited for 3 years** if none of the areas was evaluated as "unsatisfactory" (1 point) and at least one evaluation area was evaluated as "satisfactory" (2 points).

The programme **is not accredited** if at least one of evaluation areas was evaluated as "unsatisfactory" (1 point).

1.2. General

The Application documentation submitted by the HEI follows the outline recommended by the SKVC. Along with the self-evaluation report and annexes, the following additional documents have been provided by the HEI before, during and/or after the site-visit:

No.	Name of the document

1.3. Background of the HEI/Faculty/Study field/ Additional information

The first cycle *University* study programme of Music technologies is executed by *Kaunas University of Technology* that is a public institution of higher education operating in accordance with the Republic of Lithuania Law on Higher Education and Research. The

Programme has been firstly offered at the Faculty of Humanities in 2003. The execution of the Programme has been coordinated by the Department of *Audiovisual Arts*, which has operated in the former *Faculty of Humanities* and currently the *Faculty of Social Sciences, Arts and Humanities.*

The External Review team is pleased to submit this report on the f Programme The evaluation was undertaken with reference to the legal requirements pertaining to Lithuanian Higher Education and Research as outlined in information and documentation provided by the Centre for Quality Assessment in Higher Education. The report is based on the information and insights gained from the Self-evaluation report (SER) prepared by the University and from the site visit undertaken by the External Evaluation Panel on 11th May 2015 The SER included Appendices providing information on study courses, teaching staff, material resources and others. The site visit included meetings with administrative and teaching staff, current students, alumni and social partners/stakeholders.

The review team also had the opportunity to examine the facilities and resources which are available to the programme within the University and to see examples of students' work.

The review team appreciated the level of detail provided in the self-assessment report and would like to acknowledge the effort made by the Department in preparing it. It was informative, providing sufficient information on background and context along with an appropriate level of statistical data, as well as highlighting the strengths of the programme and identifying 'areas to be improved'.

The site visit was well organised and there was fruitful discussion and exchange between the review team and the various groups involved. Our team was impressed by the good atmosphere and free exchange of thoughts with every group, also by the close connection of the study programme with the social partners and stakeholders.

The review team presents this report as an evaluation of the *Music Technologies* Study Programme and hopes that the recommendations included will make a positive contribution to the ongoing development and growth of the programme.

1.4. The Review Team

The review team was completed according *Description of experts' recruitment*, approved by order No. 1-01-151 of Acting Director of the Centre for Quality Assessment in Higher Education. The Review Visit to HEI was conducted by the team on 11th of May, 2015.

1. **Prof. dr. Frans de Ruiter (Team Leader),** *Director of the Academy of Creative and Performing Arts, Leiden University, Netherlands.*

2. **Prof. dr. habil. Mihaly Duffek,** *Head of Piano Department, Dean of Faculty of Music, University of Debrecen, Hungary.*

3. **Dr. Terence Clifford-Amos,** *International Consultant/Visiting Professor in the Renaissance, Université Catholique de Lille, France. United Kingdom.*

4. **Ass. prof. dr. Rolands Kronlaks,** *Assistant professor at Jāzeps Vītols Latvian Academy of Music, Latvia.*

5. **Prof. dr. Diana Strakšienė,** *Head of the Department of Music Education, Šiauliai University, Lithuania.*

6. **Ms**. **Aušrinė Nenortaitė**, *Student Member, Faculty of Economics, Vilnius University, Lithuania.*

II. PROGRAMME ANALYSIS

2.1. Programme aims and learning outcomes

The SER of *Music Technologies study* programme states that the programme is first cycle study programme aimed to train specialists in professional management and practical operation of new music technologies. The programme is developed according to the key characteristics of higher education music programmes determined by the Bologna working group of the European Association of Conservatoires, Music Academies and Music Higher education institutions (AEC). The aims and objectives are suitable for musical (artistic) activity reconciled with programme objectives. From the perspective of labour market demand and employers' interests, the Alumni professional specialists in the area of music technologies successfully pursue careers in the music profession, i.e. at cultural, music education and research establishments, and music related business enterprises: National and Kaunas Philharmonics, National Radio and Television *LRT,* other local radio and television companies, concert agencies, music clubs and recording studious.

The aim of the study programme is formulated according to the University and the Faculty of Social Sciences, Arts and Humanities strategy and mission and it is: "to prepare creative Bachelors of music technologies and industry who will have modern and working knowledge present at the interface of music and music technology application and will be able to independently and responsibly apply theoretical and practical skills and knowledge in the interdisciplinary working space, to make an artistic sound recording, create and realize multimedia projects using also information and communication technologies, to plan their

personal career in the areas of music and audio- visual art, to be a competitive partner in mutual projects with experts/specialists of multi art fields. They will be able to develop transferable skills and apply them as subject to the context, taking his/her ethical and social responsibility" (SER, p. 11, table 3)

The aim of the programme itself includes the essence of the qualities a music technology expert must possess: besides having expertise in music technologies, this specialist should be also a great communicator, competent in multimedia art and other fields. Knowledge of music, acoustics, engineering, programming are all related aspects of their everyday life. Especially of this multi-disciplinarity it is not easy to implement the studies of music technologies in life. Besides it - the world of music technology is changing quickly, the schools and teachers have to follow these processes and flexibly react to them in order to provide the students actual, up-to-date information. This is a challenging task - it asks for a well planned curriculum, knowledgable teachers, solid material resources invested in the facilities, software and hardware and also very active connections with other departments, schools, social partners in order to provide the possibilities for collaboration which are necessary when studying certain aspects of music technology. All these premises make music technology studies quite demanding to organize.

The *Music Technologies* study programme at KTU is only one of two similar programmes in Lithuania and it claims to be unique in a local context combining different fields: "The KTU's study programme of *Music Technologies* is unique because it is an interdisciplinary study programme which functions on the combination of arts, music, technologies and social sciences. In addition to this, students get deep preparation of music industry and technologies and gain more practical experience working in real situations and practice-based context settings." (SER p.11, point 38)

We must agree that the idea of organizing the interdisciplinary programmes with music technology studies in the technical universities is not new from an international perspective - a good example is Technical University of Berlin. Recently there is also a tendency to organize innovative art study programmes combining forces of several higher education establishments. The challenge (and we will come back to this also at Curriculum Design analysis) for these kinds of programmes (and also for *Music Technologies* at KTU) is to balance the studies in such a way that according to the student's interests both more technologically and artistically inclined students could develop equally well under the same roof. From the meeting with the teachers and social partners the feedback was such that this problem is not 100% solved in the programme. However, knowing the situation in other similar study programmes internationally, this situation is rather common.

As it is stated in the SER - the formulated learning outcomes of the programme are defined according the structure of the description of the first-cycle study learning outcomes: knowledge and its application, research abilities and skills, subject- specific abilities and skills, and personal abilities and skills (according to the order of the Minister of Education and Science of the Republic of Lithuania 'On Ratification of Study Cycle Description' No. V-2212 on November 21, 2011).

The review team found these learning outcomes well defined and reflecting the most important skills, knowledge and expertise the young music technology specialists must dispose after graduation.

Summarizing the *Programme aims and learning outcomes:*

From the meeting with the Faculty and reading the self-assessment report it is evident that the leaders of the *Music Technology* programme of KTU are aware of the modern needs for music technology specialists training;

The aims and learning outcomes of the programme are up-to-date, well defined and reflecting the most important skills, knowledge and expertise;

There are no doubts about the necessity of this study programme for the society – professionals in music technology are on demand, the employment percentage of the graduates is high;

The study programme is unique in context of Lithuania combining musical arts and sound engineering.

2.2. Curriculum design

The curriculum consists of general University courses, study field courses and electives and is composed of 240 credits. The structure of the programme complies with the *General Requirements for First Cycle Degree Study Programmes and Integrated Study Programmes* set by Minister of Science and Education in 2010. An interesting observation regarding the compliance with these requirements is that 195 credits are taken for the study field subjects (the requirements are for at least 165 credits) and 27 credits to elective subjects determined by University (the requirements are for at most 60 credits) including an internship. We found these General Requirements not very well suitable for this type of study programme as there are only University courses provided for the electives and not the courses directly related to the subjects of music technologies. This is somewhat contradictory to the idea of individual paths, I.e. specialization for each student. The review team finds that at the moment there is a tension between an overload, perhaps even a redundancy of the compulsory subjects, and the students' wish to do 'independent work', as a consequence of their needs.

The studies of the programme of *Music Technologies* complete with the final degree project (thesis)**.** The topics of the final degree projects are selected at the beginning of the last semester during consultations with the scientific advisor, approved by the *Department*. The topic of the final degree project is formulated by means of drawing specific attention to student's interest areas and music technologies topicalities. The review team was introduced to the final degree projects and generally we found that the level of the degree projects is sufficiently high for the first cycle studies.

Analyzing the structure and content of the courses directly linked with the subject of music technologies – Introduction to Music Technologies, Fundamentals of Audio Technologies 1, 2, 3, 4, Basics of Sound Synthesis 1, 2, Music Software1, 2, 3 - the review team found the structure very logical and corresponding to the premise expressed in point 48 - semesters 1,2 – building the basic knowledge, semesters 3,4 – fundaments and particular skills, semester 5,6 – mastering the skills, semester 7 – preparation for the final degree project. There is also a well planned block of musical studies including Music Background 1, 2, History of 20th Century Music, Orchestra and Score Reading, Aesthetic of Music. Although it is evident that this block might be too general for the students who wish to concentrate on the artistic and creative work. This is another element of consideration - whether for the students the aspect of performing and producing music should be reinforced. The leadership of the programme could decide to introduce study-paths, one more technical and applied, one more artistic and creative.

We found important that the courses include various teaching methods and that many hours are devoted to the practical and laboratory work. The amount of teaching hours in general is quite high but there is no individual teaching used in the programme (which is so common for musical studies in general). Considering that the studies of music technologies also request for the individual approach, whether it concerns software studies or practical issues like connections of the audio systems, it is easy to understand why there are so many contact hours necessary for each course.

Less convincing in our opinion is the description of the content of each study course itself. It is not easy to understand by analyzing the content of the studies why there are certain topics and sections reappearing several times in different study courses. For instance, the theme *Microphones* is covered in the study course *Fundamentals of Acoustics 3, Fundamentals of Audio Technologies 1 and Fundamentals of Audio Technologies 2*. For the last two mentioned courses there is no further explanation what aspects are covered (it could be for instance, technical analysis of different types of microphones or Microphone techniques used for recordings etc.). Generally, the titles of the themes and sections for most of the study courses are given in a possibly "minimalistic" and open way, leaving questions what exactly is taught and

what are the contents of the practical and laboratory works. The only aspect we can rely on at the moment are the summaries of the courses which are giving at least small hint about it. The overlapping of the content is acknowledged also in the SER, although saying that 'usually similar content is presented from the different angles'. At the meeting V. Kederys confirmed that the same theme can reappear but there are different aspects of it covered. So we come to conclusion that this is matter of working out more detailed study course programmes (perhaps it is already done in Lithuanian but we can analyze only what was presented to us). The review team suggests also suggests to use more actively the infrastructure of information communication technologies available in the University (Moodle).

Another suggestion would be to consider to include in the curriculum the visual programming language studies - Max/Msp or Pure Data. The feedback from the students was such that Max/Msp used to be taught but not anymore. The review team finds it to be of major importance – even if the students would not reach a high level in working with these tools -that isto build complex patches themselves-they at least should know how to operate with readymade patches. These visual programming languages are used nowadays in very different contexts including interactive audiovisual installations and concert music performances with electronics.

Summarizing the Curriculum design:

The abundance of compulsory subjects is in conflict with the students' need to do individual work and the wish to specialize in certain aspects of music technology;

Music technology study line is very rich and well planned, on the other side the music studies might be too general for the students with musical/artistic interests. The review team suggests to consider the introduction of study-paths, one more technical and applied, one more artistic and creative.

The description of each particular course is too general to be critized or praised, we see the redundancy of certain themes which is admitted also in the self-assessment;

The review team suggests including the studies of visual programming languages in the curriculum.

2.3. Teaching staff

The SER states that for the 2014-2015 academic year, there are 12 teachers in the department of Audiovisual Arts: 3 professors, 3 lecturers, and 6 invited visiting lecturers. Also 6 lecturers from various departments were teaching general study subjects .The study programme is also organised by inviting practicing professional from the area of the music technologies and industry. Because of the interdisciplinary nature of the study programme, the permanent teachers working in the programme are of three backgrounds-qualifications: researchers, artists

(performers), and sound engineers. The researchers hold the PhD degrees in Humanities (Art research) and academic titles of full professors. The artists and sound engineers hold Master degrees obtained in Lithuanian and foreign universities.

The review team finds the amount of lecturers, their qualification good enough to provide high quality teaching level for the programme. There is a good balance of experienced tutors – researchers, holding the positions of professors and younger teachers, sound engineers and the art practitioners who have made their mark in correspondent fields of activity (The average teachers age being 38,6 years). The recognition of the teachers' professional work is consistently contributing to the popularity of the programme and we found it to be a good sign that there are recently new teachers invited who are artistically active. As we noticed from the meetings with alumni and social partners, there is a good connection between the University and the professional environment of music technologies which is showed in different forms: involvement of the students, help with the equipment and as we see in this paragraph, also teaching. At the same time we can read in the self-assessment report that there is a struggle (because of the reward system and bureaucracy) to attract high-ranked experts from the field for the programme (p.82) and also that there are plans to expand the partnership with the alumni experts for the seminars (p.83).

Recently there has been major changes in the department; its establisher prof. Kuprevičius has retired and prof. Martinelli from Helsinki University has taken the professorship. There are also changes in the leadership of the department; lecturer V. Kederys, a former student of *Music Technologies* programme in KTU, has become the Head of Department. Appointed one year ago he proved to be a great communicator, with an open ear for demands from students, listening and actually doing something. He is accessible and reacts. On top he has a good overview of the field, inside and outside the school. Also alumni praised the new fresh wind in the programme.

There is a sufficient amount of guest lecturers visiting KTU through the Erasmus exchange programme in the period of 2010-2014. On contrary the teachers from KTU are surprisingly passive going abroad – only two visits to other universities during the period. This fact is also mentioned as one of the weaknesses in the SER. The review team is suggests more active participation in Erasmus exchange programme and enriching international activities in general as it is always helping to have new contexts, insights and ideas for the curriculum.

2.4. Facilities and learning resources

The premises for studies are adequate both in their size and quality. The self-evaluation report states that the successful implementation of the programme of *Music Technologies* is

determined by a sufficient number of premises at the University units: rooms with modern audio and video equipment, laboratories with efficiently working and safe laboratory equipment, music recording studio with sound recording and monitoring systems. The study process is organized by referring to the norms of pedagogical work accounting for the flows of student contact classes: for lectures – 25 students, practical classes – 16, laboratory work – 8. Theoretical and practical training classes are taking place in computerized auditoriums, computer laboratories and the Sound Recording Studio

The material resources are one of the most important parts of music technology education. In order to provide high quality of teaching the school must provide regular access to equipment for the students to study, try out, experiment. It is also necessary for the students to get acquainted with a variety of technologies – digital and analogue mixing consoles, different loudspeakers, software, etc. From the information gathered in the SER and the on-site visit the review team found that the situation particularly concerning the access to the music technologies in the programme is satisfying but at the same time not ideal– we think that in the near future major investments should be made.

The Sound Recording Studio as it is stated in the SER is recently moved from one building to another and at the moment it is not optimized for professional work (nevertheless it is set to be improved in 2015). Apart of the improvement actions to follow expressed in the SER, that is, to build separated monitoring room and install a surround monitoring system (SER. p.93), the review team is suggesting to consider to build several simple, small mixing studios with computers, sound cards and stereo monitoring to provide students regular access to the rooms with good listening conditions. It seemed that most of their creative work at the moment is done at the computer lab or on students own computers with headphones. Taking into account that there are around 30 students in the programme, we can imagine that the bigger studio with recording possibilities and surround sound will not be very often available for the students' individual use.

The recently updated (2013-14) computer lab is effective – equipped with 7 computers with sound cards and MIDI keyboards. On the other side the amount of available software applications for the computer lab and the Recording studio is very limited. This was also confirmed by the students who expressed their disappointment with this situation – they can understand the limitations for the hardware (because of expenses) but not for the software. Some of the software applications we would recommend to add are Ableton Live, Pro Tools, Max/Msp, Max for Live. Generally, we found that at the moment the available equipment for music technology is somewhat on the minimum side for this kind of study programme, even taking into account the teachers and social partners' claim of the availability of equipment provided by the

rental companies for certain study courses and recordings. Concerning the earlier mentioned major investment necessary for the study programme, it is important in our view to plan this investment seeing the future of the programme in a bigger picture – whether to continue with general music technology studies (as it seems to function at the moment) or to specialize into some concrete aspects like hall amplification, recording etc. The field of music technologies in our opinion is too big to provide equally good training in all the disciplines.

In order to accomplish self-study assignments, the students can use also computers present at the library and Room 103 as well as the reading room of the Central Library with 174 work places; 32 out of them are computerized. The amount of books available on music technology topics is not very big, but it seems that recently there have been certain principles and regularities established how the new books are ordered. The impression of the Central Library is very good. The review team found that generally the Recording studio, Library and classrooms show a decent, neat and clean maintenance and invite to a productive working climate.

2.5. Study process and students' performance assessment

As we can see from the self-assessment there are 89 study places for all the music field study programmes in Lithuania. Last year there were 49 applications are 10 students invited for the studies. The admission requirements are well-founded. It is organized by Association of Lithuanian Higher Education Institutions LAMA BPO. Information about applicants ranking is well reflected on the University website.

The on-site visit showed that students of the Music Technologies study programme are very motivated. New students benefit from an introduction week, where they receive information about the University, Faculty, Library, study process, the aims of the study programme and study subjects and the career perspectives. It ensures intelligible understanding of the study programme and students integration into the University community.

The Faculty guarantees an adequate level of academic support: students are supported by tutors, academic advisors and mentors, teachers consult students during their consultations hours or via email. Students' interests are represented by the student representation body of the Faculty. Additionally, students have round table meetings with the Faculty administration, where they can express their opinion and doubts about the study programme or process. Information about social and academic support is publicly available on the University website. Students can obtain an incentive scholarship for their study results and (or) for activities representing the University in scientific, cultural or other character events. Should students match the requirements set in the social scholarship award and administration regulations approved by the Government of Lithuania, they can receive regular social scholarship. Financial

support is provided to students with disabilities. Socially supported students and students with disabilities scholarship do not lose possibility to receive other scholarships. In addition, the self-evaluation report discusses psychological and pastoral counselling for the University community. Besides these, students have wide possibilities to participate in various sports, art or other organizations' activities.

There are opportunities for students to participate in mobility programmes. Information about available partners is on the Faculty website. Only 3 students attended Erasmus exchange programme during period 2012-2014, consequently there is room for further development. During the visit the Faculty administration admitted that the number of outgoing students should be improved. They named the main problem as to why students do not participate in mobility programmes. At present the Faculty's partners - University of Music and Performing Arts Graz, Geneva University of Music and others – mostly require languages that KU students do not know well. The University Administration presented measures that will be taken to enlarge the number of outgoing students, including the search for more various partners by taking into consideration the Faculty students' knowledge of foreign languages. Nevertheless during the meetings with students and graduates they expressed that most students do not want to undertake mobility programmes anyway because they are already working in their specialization.

The assessment system of students' performance is clear and publicly available in descriptions of Study programme subjects. It is pertinent to mention that the study programme employs a varied assessment criteria for theoretical knowledge and practical tasks.

Results of students' employment surveys confirm that on average 70% of students work according to their specializations. This percentage is strong. In the meetings it was expressed that specialized students are required for the labour market. Employers have direct, unofficial connections with lecturers, which are important for the sharing of thoughts about the preparation of specialists in music technologies. Nevertheless, during the visit employers stated that the more technical skills students possess the better. In conclusion it could be said that the review team is very happy of the ongoing study process for this programme.

2.6. Programme management

The responsibilities and monitoring of the Programme is taking place on several levels - *Music Technologies* management is led by the administration of the programme which is shared by the dean of the *Faculty of Social sciences, Art and Humanities,* the chair of the *Study programme Committee* and the vice-dean responsible for study processes. The administration appoints a coordinator (Head of Department of Audiovisual Arts) and also social stakeholders from businesses and industry, the student association and the teachers. The study programme is

renewed every year in the Study programme Committee and is updated after the evaluation of comments from students, businesses and organisations. There are also many internal quality control forms such as surveys filled by the students evaluating study courses, the teaching methods etc., meetings with students, visits to lectures and others. The study programme Committee is using survey results for the evaluation of the work of teachers and assessment of courses. Internal study quality is achieved by the implementation of the internal education quality assurance system, approved by the resolution of *the Senate of KTU* (July 2, 2010, No. 49), which is based on the most important documents of the European Union higher education policy (Bologna and the Copenhagen Declaration, Berlin and Bergen Communications, and etc.) that fulfil principles and guidelines of the *European Higher Education Quality Assurance* and the key laws and regulations of higher education of *the Republic of Lithuania*.

From the self-assessment report and the meetings and discussions we are assured that the management of the programme is well organized. As we underlined already before, the work with the social partners is one of the stronger parts of the programme management - the stakeholders and social partners feel valued and the SER (p. 147) outlines that there is a committee or a council for the students, stakeholders, teachers and programme administrators to provide their contributions and participation. The review team found also that there is good communication within the Faculty and also communication with the students is based on free exchange of opinions (especially since appointment of V. Kederys), although the number of students that formally evaluate the programme and teachers in structured feedback needs to increase. Because of relatively small number of students the communication is very informal and it seems to fit fine the current situation, but we are advising to think about a more formally organized structure in which the students could find on the KTU website when they can talk with the administration and teachers on the matters of study process, technical help with equipment and other studies related issues.

III. RECOMMENDATIONS

1.   The review team suggests to find ways to provide the opportunity for the students to specialize within the formal structure of the curriculum, and also to consider to open several study paths;

2.   To work out more detailed outlines of study courses, ideally with short annotation and individual work assignment description for each lecture, laboratory and practical work. This would help also to coordinate the lecturers work, as they would know better what the other lecturers do in their courses and help to avoid the redundancy of themes;

3.   To include visual programming languages (Max/Msp or PureData) studies in the

curriculum, as those languages are widely used nowadays in different kinds of music and multimedia projects;

4.   To look for financial support in order to invest in the equipment and the studios, to expand the possibilities for the students to work in good listening conditions by building several simple mixing studios;

5.   To encourage students and teachers to use more actively the opportunities provided by the Erasmus exchange programme;

6.   To work on more formalized structures (on KTU webpage) for communication between administration, teachers and students.

IV. SUMMARY

As can be seen from the SER and also from the meeting with the administration, teachers, social partners and alumni, the programme's aims are generally achieved – the graduates' employment is high and the programme is also having a good reputation in the context of the local music industry. What we found important is that since the launch of this programme in 2003 it has (at least a bit) changed the music technology field in Lithuania. At the moment it seems that the employers (rental companies, TV, Radio) are looking for their potential employees among the graduates of the programme. One of the social partners mentioned in the conversation that they are interested to attract good students for the sound amplification industry already during their studies. Another social partner mentioned that there is a certain "quality stamp" for the programme - if he sees graduate from KTU Music Technologies behind the mixing console in the concert he knows that the sound will be good. We found these examples being a good confirmation of the high reputation and also the necessity of this programme in Lithuania.

The teachers working in the programme are active and recognized professionals in their field. They have a wide range of experience in musical arts, sound engineering and also in academic/research activities. Teachers are provided with good conditions for their further professional, scientific and educational development.

There are good facilities and learning resources available for the students. The central library with many computerized working places is providing good conditions for individual work assignments. As it was mentioned previously the situation with the access to various music technologies is also satisfying although there is still room for improvement (comparing to similar programmes elsewhere). We think that the KTU and administration of the programme in the near future should work on major investment into facilities, hardware and, for sure, software.

At the moment it seems that the study programme is proposing a rather generalistic

approach to the music technologies. It is up to the school to decide whether they want to continue this way (perhaps even adding some missing parts - programming, sound for games etc.) or to find the areas where they want to specialize and excel. Especially important it would be if the *Music Technologies* programme leadership wants to make the programme internationally recognized, attract foreign students, go for more active Erasmus exchange etc. There is no easy advice the review team might give in this regard because these perspectives are entirely depending on the possibilities to invest in the facilities, the availability of teachers with high level expertise in these fields and other related aspects.

Overall the review team is pleased to say that we have gained a positive impression - there is a good atmosphere, a positive spirit shown by strongly motivated people. We think that the strength of the programme lies in its well defined aims and learning outcomes, teachers, management, strong relations with the social partners and stakeholders and we wish KTU success in the continuation to improve the other areas. The review team hopes that the recommendations included will make a positive contribution to the ongoing development and growth of the programme.

V. GENERAL ASSESSMENT

The study programme Music Technologies (state code – 612W37001) at Kaunas University of Technology is given **positive** evaluation.

Study programme assessment in points by evaluation areas.

No.	Evaluation Area	Evaluation of an area in points*
1.	Programme aims and learning outcomes	4
2.	Curriculum design	3
3.	Teaching staff	3
4.	Facilities and learning resources	3
5.	Study process and students' performance assessment	4
6.	Programme management	4
	Total:	**21**

*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.

Grupės vadovas: Team leader:	Prof. dr. Frans de Ruiter
Grupės nariai: Team members:	Prof. dr. habil. Mihaly Duffek
	Dr. Terence Clifford-Amos
	Ass. prof. dr. Rolands Kronlaks
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KAUNO TECHNOLOGIJOS UNIVERSITETO PIRMOSIOS PAKOPOS STUDIJŲ PROGRAMOS *MUZIKOS TECHNOLOGIJOS* (VALSTYBINIS KODAS – 612W37001) 2015-08-04 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-224 IŠRAŠAS

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V. APIBENDRINAMASIS ĮVERTINIMAS

Kauno technologijos universiteto studijų programa *Muzikos technologijos* (valstybinis kodas – 612W37001) vertinama **teigiamai**.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	4
2.	Programos sandara	3
3.	Personalas	3
4.	Materialieji ištekliai	3
5.	Studijų eiga ir jos vertinimas	4
6.	Programos vadyba	4
	Iš viso:	21

* 1 – Nepatenkinamai (yra esminių trūkumų, kuriuos būtina pašalinti)
2 – Patenkinamai (tenkina minimalius reikalavimus, reikia tobulinti)
3 – Gerai (sistemiškai plėtojama sritis, turi savitų bruožų)
4 – Labai gerai (sritis yra išskirtinė)

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IV. SANTRAUKA

Kaip matyti iš savianalizės suvestinės (toliau – SS), taip pat iš susitikimų su administracija, dėstytojais, socialiniais partneriais ir alumnais, programos tikslai iš esmės yra pasiekti, t. y. absolventų įsidarbinimo lygis aukštas, programa turi gerą reputaciją vietos muzikos pramonėje. Mums pasirodė svarbu tai, kad nuo 2003 m., kuomet pradėta, ši studijų programa pakeitė (bent šiek tiek) muzikos technologijų sritį Lietuvoje. Šiuo metu atrodo, kad darbdaviai (nuomos bendrovės, televizija, radijas) ieško potencialių darbuotojų tarp programos absolventų. Vienas socialinių partnerių atstovas susitikime minėjo, kad norėtų pritraukti gerų studentų į garso stiprinimo pramonę, kol jie dar nebaigę studijų. Kitas socialinis partneris nurodė, jog programa turi „kokybės antspaudą", t. y. jei jis mato, kad prie muzikos pulto koncerte stovi KTU studijų programą *Muzikos technologijos* baigęs absolventas, žino, jog garsas bus geras. Mums pasirodė, kad šie pavyzdžiai – geras aukštos programos reputacijos ir poreikio Lietuvoje patvirtinimas.

Šią studijų programą vykdantys dėstytojai yra aktyvūs ir pripažinti savo srities profesionalai. Jie turi didelę patirtį muzikos meno, garso inžinerijos, taip pat akademinės ir (arba) mokslinių tyrimų veiklos srityse. Dėstytojai turi geras sąlygas tobulėti profesinėje, mokslo

ir edukacijos srityse.

Studentai turi gerą materialiąją bazę ir mokymosi išteklius. Centrinėje bibliotekoje yra daug kompiuterinių darbo vietų – sudarytos sąlygos atlikti savarankiško darbo užduotis. Kaip minėta, prieiga prie įvairių muzikos technologijų taip pat patenkinama, nors tobulėti yra kur (palyginti su panašiomis programomis kitur). Manome, jog KTU ir šios studijų programos administracija artimiausioje ateityje turėtų stengtis reikšmingai investuoti į patalpas, kompiuterinę ir, žinoma, programinę įrangą.

Atrodo, kad šiuo metu studijų programa pasižymi gana universaliu požiūriu į muzikos technologijas. Pati mokykla turi nuspręsti, ar ji nori tęsti tai, kas yra (galbūt įtraukti keletą trūkstamų dalių: programavimą, žaidimų garsą ir t. t.), ar ieškoti naujų specializacijos ir tobulėjimo sričių. Tai ypač svarbu, jei vadovybė nori, kad studijų programa *Muzikos technologijos* būtų pripažinta tarptautiniu mastu, taip pat – pritraukti studentų iš užsienio, aktyviau naudotis *Erasmus* mainų programa ir kita. Ekspertų grupei nelengva patarti šiuo klausimu, nes perspektyvos visiškai priklauso nuo galimybių investuoti į patalpas, šiose srityse aukštą kompetenciją turinčių dėstytojų prieinamumo ir kitų susijusių dalykų.

Apskritai ekspertų grupei malonu patvirtinti, kad ji susidarė teigiamą įspūdį: gera atmosfera, labai motyvuoti žmonės rodo teigiamą dvasią. Manome, kad šios programos stiprybė – gerai apibrėžti tikslai ir studijų rezultatai, dėstytojai, vadyba, geri santykiai su socialiniais partneriais ir dalininkais. Linkime KTU sėkmės toliau tobulinant kitas sritis. Ekspertų grupė tikisi, kad pateiktos rekomendacijos bus naudingos plėtojant ir tobulinant studijų programą.

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III. REKOMENDACIJOS

1. Ekspertų grupė siūlo ieškoti būdų studentams leisti rinktis specializaciją formalioje studijų turinio struktūroje, taip pat apsvarstyti galimybę atverti keletą studijų kelių.

2. Rekomenduojama parengti išsamesnius studijų dalykų aprašus, geriausia – su kiekvienos paskaitos, laboratorijos ir praktinio darbo anotacija ir savarankiško darbo aprašu. Tai padėtų koordinuoti dėstytojų darbą, jie geriau žinotų, ką dėsto kiti dėstytojai savo kursuose, ir padėtų išvengti temų pasikartojimo.

3. Patartina į studijų programą įtraukti vizualinio programavimo kalbų (*Max/MSP* arba *PureData*) studijas, nes šios kalbos plačiai naudojamos įvairių rūšių muzikos ir multimedijos projektuose.

4. Siūlytina ieškoti finansinės paramos investicijoms į įrangą ir studijas, plėsti galimybes studentams dirbti geromis klausymo sąlygomis įrengus kelias paprastas daugiafunkcines muzikos studijas.

5. Rekomenduojama skatinti studentus ir dėstytojus aktyviau naudotis *Erasmus* mainų programos teikiamomis galimybėmis;

6. Reikia parengti formalesnę administracijos, dėstytojų ir studentų bendravimo struktūrą (KTU interneto svetainėje).

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Paslaugos teikėjas patvirtina, jog yra susipažinęs su Lietuvos Respublikos baudžiamojo kodekso 235 straipsnio, numatančio atsakomybę už melagingą ar žinomai neteisingai atliktą vertimą, reikalavimais.

                         Vertėjos rekvizitai (vardas, pavardė, parašas)