STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

KAUNO TECHNOLOGIJOS UNIVERSITETO

INFORMATIKOS STUDIJŲ PROGRAMOS (612I10004) VERTINIMO IŠVADOS

EVALUATION REPORT OF *INFORMATICS* (612I10004) STUDY PROGRAMME AT KAUNAS UNIVERSITY OF TECHNOLOGY

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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	***Informatika***
Valstybinis kodas	612I10004
Studijų sritis	Fiziniai mokslai
Studijų kryptis	Informatika
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Pirmoji
Studijų forma (trukmė metais)	Nuolatinė (4 m.), ištęstinė (6 m.)
Studijų programos apimtis kreditais	240 ECTS
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Informatikos bakalauras
Studijų programos įregistravimo data	Lietuvos Respublikos švietimo ir mokslo ministro 1997 m. gegužės 19 d. įsakymu Nr. 565

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	***Informatics***
State code	612I10004
Study area	Physical Sciences
Study field	Informatics
Kind of the study programme	University Studies
Study cycle	First
Study mode (length in years)	Full-time (4 years), part-time (6 years)
Volume of the study programme in credits	240 ECTS
Degree and (or) professional qualifications awarded	Bachelor of Informatics
Date of registration of the study programme	19 of May 1997, under the order of the Minister of the Ministry of Education and Science of the Republic of Lithuania No. 565

CONTENTS

I. INTRODUCTION

The procedures of the external evaluation of the Kaunas University of Technology (hereafter, KTU) *Informatics* Bachelor study programme were initiated by the Centre for Quality Assessment in Higher Education of Lithuania nominating the External Evaluation Peer Group (hereafter, EVPG) formed by the head, Professor Philippos Pouyioutas (Professor of Computer Science and Vice Rector, University of Nicosia, Cyprus), Professor Manfred Nagl (Professor Emeritus of Software Engineering, RWTH Aachen University, Germany), Dr Eleni Berki (Adjunct Professor of Software Quality and Formal Modelling, University of Tampere, Finland), Mr Adomas Svirskas (Freelance IT Consultant and Researcher, Institut Eurécom, Sophia-Antipolis, France), employer representative, and Mr Justinas Petravičius (Vilnius Gediminas Technical University, Lithuania), student representative.

For the evaluation the following documents have been considered:

1. Law on Higher Education and Research of Republic of Lithuania;
2. Procedure of the External Evaluation and Accreditation of Study Programmes;
3. Methodology for Evaluation of Higher Education Study Programmes;
4. General Requirements of the First Degree and Integrated Study Programmes.

The basis for the evaluation of the study programme is the Self-Evaluation Report (hereafter, SER), prepared in 2013, its annexes, the site visit of the EVPG to KTU on 7 November 2013 and the two site visits of two other KTU study programmes (6 November 2013 for the *Software Systems* Bachelor study programme and 8 November 2013 for the *Informatics* Master study programme), as well as the SER of the aforementioned two other study programmes. The three site visits helped the EVPG get an overall view of the way the KTU Faculty of Informatics, its departments and study programmes offered operate. The site visit of the *Informatics* Bachelor study programme incorporated all required meetings with different groups (except senior administrative staff, with whom EVPG met during the 6 November 2013 site visit): staff of the three departments of the Faculty of Informatics offering the study programme and responsible for preparing the SER, teaching staff of the three departments, students of all years of study, graduates and employers. The EVPG evaluated various support services (classrooms, laboratories, library, computer facilities), examined students' final works, and other provided material. After the EVPG discussions and additional preparations of conclusions and remarks, introductory general conclusions of the site visit were presented. After the site visit, EVPG met to discuss and agree the content of the report, which represents the EVPG's consensual views.

The findings of the EVPG during the three site visits re-enforced the view of the EVPG that there are some organizational issues to be addressed at the faculty level. By reading the three SERs for the three study programmes evaluated, the EVPG identified a number of discrepancies as same data/information is expressed in very different ways, resulting in overall confusion. The EVPG's conclusion from reading the three SERs was that the three reports were prepared in isolation of each other. During the three site visits, this was clarified to be the case; thus, the reports were not built using a modular approach with the three SER groups working together for the common parts/issues addressed, an approach one would expect to be followed by informatics specialists. The overall approach of preparing the SERs separately indicates the fact that the various departments involved, do not co-operate enough (both at the strategic level, as well as at the operational level).

The three site visits helped the EVPG to understand the structure of the Faculty of Informatics and its departments. This was not clear at all from reading the three SERs. Only after a request by the EVPG, a hierarchical organizational chart/diagram was provided, listing the five departments of the faculty and under each department the study programmes offered, as well the number of students and graduates of each programme. The EVPG was informed that during the last years, re-organization has been taking place, which resulted in merging departments (from 7 before to 5 now). The 83 teaching staff members of the faculty are now distributed in the 5 departments (an average of 17 staff per department), which are: Computer Science, Information Systems, Software Engineering, Multimedia Engineering, and Applied Informatics. The EVPG noticed, the names of the departments do not clearly reflect their specialization in research and teaching. It seems that the existing faculty structure reflects the historical situation rather than today's needs and state-of-the-art developments. The EVPG believes that further re-organization needs to take place in order to utilize better human resources and promote collaboration between departments, study programmes and staff.

All mentioned departments offer one Master and one Bachelor study programme except of the Software Engineering Department which offers two Bachelor and one Master study programme. In total the Faculty of Informatics offers 6 study programmes at the 1st cycle (Bachelor) level: *Informatics Engineering, Information Systems, Software Systems, E-Learning Technologies, Multimedia Technologies, Informatics* and 5 study programmes at the 2nd cycle (Master) level: *Information and IT Security, Information Systems Engineering, Software Engineering, Information Technologies of Distance Education, Informatics*.

The Bachelor study programmes are all based on a 2+2 model. The first two years (120 ECTS credits) of all six study programmes are the same, thus students of all study programmes share the same classes. Each course of the first two years is owned by one of the 5 different departments (i.e. none of the departments own all courses). The last two years (120 ECTS credits) provide a specialization, leading thus to the 6 individual study programmes (*Informatics Engineering, Information Systems, Software Systems, E-Learning Technologies, Multimedia Technologies, Informatics*). It is important to note that all 6 Bachelor study programmes also share a number of 3rd and 4th year courses offered during the last two years. Thus on average, there is a 70% overlap between the 6 study programmes, making it difficult to clearly distinguish their identity, clear objectives and differences when compared to each other. The descriptions of the study programmes are thus not very attractive to students. They do not adequately explain the possibilities of specialization, the differences to other study programmes offered, the attractiveness for the labour market, the specific profile of the graduates, etc.

Furthermore the overall responsibility to offer the study programmes, seems to be more at the faculty/Dean level. As it was clear during the three site visits, there is very tight control at the faculty level with regards the direction of the Faculty, the departments and the study programmes. The decision-making and control are in the hands of the Dean, the Heads of departments and the programme leaders/co-ordinators. The teaching staff is not involved to any extent in decision-making and/or providing input and feedback. Thus, a bottom-up approach should be also adopted in the decision-making, empowering the teaching staff to contribute to change and innovation.

The *Informatics* Bachelor study programme is offered by two Departments: (i) Applied Informatics Department (which as explained is the result of the merging in July 2013 of two Departments, namely (a) Computer Networks and (b) Business Informatics) and (ii) Multimedia Engineering Department. The overall responsibility of the programme is with the Applied Informatics Department. The cooperation of the two (three before July 2013) departments being responsible for the *Informatics* study programme under evaluation was not directly visible. This re-enforced our perception and findings regarding the lack of close co-operation between the various departments of the Informatics Faculty.

Finally, the EVPG was concerned with the drastic drop of student numbers of the *Informatics* Bachelor study programme. The numbers of the new students in the last five years, namely 2008, 2009, 2010, 2011 and 2012 are: 236, 168, 139, 55, and 46. This is indeed very worrying and if the programme is to survive, drastic action needs to be taken, otherwise it will close down.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

The aims of the *Informatics* Bachelor study programme were outlined (in SER) as follows:

"15. Informatics Study Programme aim is to gain theoretical knowledge in computer science to develop a range of skills for solution of practical problems, to effectively choose or create the necessary software, to be able to articulate the challenges and to design their solution systems, to work individually and in a team.
16. Students gain theoretical computer science, computer hardware and software knowledge, able to apply them in different areas of informatics challenges while formulating, analyzing and solving, is able to design and install the software, competently operate computer systems and their hardware and software. Graduates can work in enterprises and institutions, to create for them original software and install it, to automate the design and manufacturing processes, to create financial organization data banks and computer systems. Also they have a specific choice of Computer Networks and the Internet Specialization, Multimedia Systems Specialization, or Bank Data Centers Module knowledge and skills."

First of all, the EVPG would like to point out that the study programme aims are outlined disorderly. Secondly, the aims are not expressed using very good English. Thus, both issues should be addressed.

The study programme focus is a rather an odd mix of Computer Networking, Multimedia and Bank Data Centres specializations. The latter is primarily aimed at servicing of the support centre of one of the large UK banks, therefore it needs to be revised to include wider knowledge of modern enterprise data centres. In addition, it is quite odd not to see Cloud Computing listed in this domain of the study programme.

The study programme intended learning outcomes in general are in line with the requirements of the Bachelor level studies, however more emphasis should be put on the modern trends of IT, namely Service-oriented Systems, IT as a Service, Virtualization, Cloud Computing. It is difficult to imagine how a young graduate could be successful without knowledge of these subjects, however they are largely absent from the SER and the study programme in overall.

At a more general, but equally important level, the commonalities and differences of the study programme aims and intended learning outcomes of *Informatics* Bachelor study programme and the Bachelor study programme *Software Systems* (and apparently also for the other 4 Bachelor

study programmes of the faculty) are not clearly defined. It means that there is no clear outside or black-box view of the different Bachelor study programmes: specific aims, specific intended learning outcomes. One would expect, that since all 6 Bachelor programmes share the first two years and also some other courses during the last two years (that is they have on average 70% overlap), that the list of the intended learning outcomes of these programmes would have an equivalent overlap and would be written in co-operation with all departments, using a modular approach. Thus one would expect that the SERs of the two study programmes evaluated by EVPG would list a common set of intended learning outcomes, as well as an additional number of intended learning outcomes for each of the two study programmes. This is not the case however as the intended learning outcomes listed in the two SERs have been written completely in isolation. It highlights the need for reviewing the intended learning outcomes of all study programmes of the faculty, identifying the common and the specific ones for each study programme.

Further to this, and as a consequence of the unclear set of the intended learning outcomes, it is not easy to read the descriptions of the study programmes, which should clearly describe the aims of the study programmes and, correspondingly, the common and different profiles of the graduates and/or their value for the labour market. The absence of such descriptions makes it even more difficult to attract students to these study programmes. Thus, the EVPG believes that there is no good reason for a student from outside, who has no direct contacts, to decide for the *Informatics* Bachelor study programme of KTU. This is especially true and important for attracting foreign students. In this case the description not only has to be in English, it also has to compete against the descriptions of other universities.

2. Curriculum design

The study programme conforms to the Bologna Process and legal and formal requirements of the Lithuanian Law. It comprises of 240 ECTS credits thus satisfying the minimum required by Lithuanian Law (210 ECTS credits) and the minimum required by the Bologna Process (180 ECTS credits). The semester student workload also satisfies the 30 ECTS credits, however this is not clear from the programme plan of studies as given in Appendix 7 of the SER. This is indicative of the problems that EVPG faced when reading the SER and comparing it with the SER of the other 2 study programmes that were evaluated. Appendix 7 provides a matrix of courses and the semesters offered, rather than simple tables of all semesters with the courses offered each semester so one can easily see the courses offered every semester and the total number of ECTS credits per semester. Out of the 240 ECTS credits, 174 ECTS credits are for

study field courses (satisfying the minimum requirement of 165 ECTS credits), 24 ECTS credits for the student practice, out of which 18 ECTS credits are for the Final Practice (satisfying the minimum of 15 ECTS credits), 12 ECTS credits for the final degree project, 18 ECTS credits for the general education courses (satisfying the minimum of 15 ECTS credits) and 12 ECTS credits for general electives. The courses are spread evenly across the semesters (though, as pointed out before this, is not clear at all by a simple look at Appendix 7 of the SER). The content of the courses is consistent with the type and level of studies and the content and methods of learning/assessment employed in the courses are appropriate for the achievement of the course and programme intended learning outcomes.

As it was stated, the study programme seems to be a combination of topics from the areas of *multimedia*, *banking systems*, and *Internet*. Two of these three areas can be taken by corresponding special Bachelor study programmes – *Information Systems, Multimedia Technologies*. The argument given during the site visit with regards to the orientation of the study programme was that the combination of these three areas is of specific interest for banks and similar companies.

The name of the study programme *Informatics* is rather unspecific. That would be all-right, if this study programme would offer the possibility to specialize in any area of informatics or to combine any of such areas. This, however, is not the case, as it is a fixed combination of the three before mentioned special areas. So, either an appropriate name should be chosen for the programme or the flexibility of the programme should be increased. That, however, demands for a quite different programme structure. As the number of students taking this study programme has gone down – especially after introducing Bachelor study programme *Software Systems* – there is also some need to discuss about the programme and its relation to other study programmes.

Dropping this programme would not be the right answer, as more people educated in Informatics are needed in the future to serve the labour market. Even more, the specifically tough demographic problem of Lithuania demands for taking all efforts to increase the number of graduates, especially in those fields where they get a good job. That also gives the hint to look at the retention and drop-out rates very carefully. All students seem to combine studies with, in many cases, much work in industry.

Research in the areas of information systems (including banking) and multimedia is carried out not in the Applied Informatics Department, which is responsible for the study programme, but in the two other departments. The EVPG could not even find out, whether the Department of

Applied Informatics is responsible for the third area, namely Internet. There was also no answer for the question to highlight research projects involving all the three areas of the study programme. This altogether indicates again that there is a need to discuss the structure of the Applied Informatics Department, its relation to other departments, the name of the study programme, the structure of the study programme, and the connection to research carried out at KTU.

The EVPG feels the necessity to highlight, that the structure of the *Informatics* Bachelor study programme is not clear enough. It is not evident what the contents of courses are about, why the programme contains certain courses and not other ones, what are the course prerequisites, etc. The programme should make up a graph, where the nodes are courses with certain and well-defined contents, clearly distributed over semesters, and with clear relations between them. In this graph also, the elective courses have to be clear (what to choose, which specific profile results, which specific fields chosen and/ or combined).

Furthermore, the following specific topics of the study programme should be clarified and clearly described: Programming, OO programming, Data Structures, and Practice of Programming, which each exists in two versions "Elements" and "Fundamentals". In the discussion EVPG learned that one version is for the non-experienced, the other for the experienced students. The course names and their description are not like this. There also seems to be some redundancy between these courses in each series of the two versions. Additionally, the role of the projects – which seem to be in some relation to the thesis work – is not clear from the SER.

The Bachelor theses are mostly done with industry. That is positive, as the practical and application view is always regarded. However, even *Bachelor theses* should have some relation to the *scientific state of the art* or the state of the art of *technology*. In some cases they even can contribute to some scientific progress. So, the process of agreeing on the topic of a thesis or accepting a thesis must have these connections in mind.

Another and more general remark belongs to the type of university studies and the international visibility of a study programme and the corresponding department or faculty: the EVPG believes that more freedom to choose courses, a closer relation to research, a specific treatment of bright students, stronger international relations (by English courses, lecturers from outside, students going abroad for some time, etc.), and a stronger influence of students for their individual study plan is needed.

Summing up, nevertheless, the name of the programme, its intended programme and courses learning outcomes, content, and qualifications offered are altogether compatible with each other to some extent. This positive statement does not override the critical remarks, suggestions, and recommendations given above.

3. Staff

In total there are 43 staff members on the study programme: 13 professors (30%), 22 associate professors (51%) and 8 (19%) lecturers. The minimal requirement by Law – no less than half of study field subjects must be taught by scientists or recognized artists is satisfied. As though, the number of teaching staff to deliver the Bachelor study programme is adequate. It also indicates, that the staff-student ratio (1:7) is one of the positive aspects of the study programme, though this is due to the drastic decrease in the number of students.

Overall, the staff members of the programme are pedagogically equipped and scientifically competent, having a PhD degree in their own research field. Sometimes, it appears that the research domain is not exactly the same as the subject area of the courses (study subjects) they taught. This in general happens in universities when new and young staff members join a department and thus some re-allocation of teaching assignments needs to take place in order to have the best match between specialization and courses taught.

During the year 2013, the average age of the programme's staff members was 52.5 (average age of lecturers was 37.4, the average age of associate professors was 54.0 and the average age of professors was 58.1). These facts indicate the necessity to renew the reserve of pedagogic personnel and reduce the average age value.

There are almost no women among the staff and their absence from the higher management positions and professorships is notable. There are hardly any other minorities noticeable. The same (disappointing) figures in women doctoral researchers and students have been observed. There should be equal opportunities policies or positive discrimination strategies for students and staff taken into consideration in the programme and faculty staff in general. An obvious recommendation here would be to have a suitable recruitment policy to attract competent students and personnel from any minorities, including women.

Many staff members (especially associate professors) seem to have a high teaching load and thus not much time for research. For instance, quoting figures from the SER, the following table illustrates the exact numbers of work activities dedicated to teaching and other tasks (e.g. research, etc.):

Pedagogic load of the lecturers in the Informatics Study Programme in the academic year of 2012-2013

Lecturers		Lectures		Other Contact hours		Non-Contact hours	
hours	%	hours	%	hours	%		
Lectors	320	11%	347	11%	213	9%	
Assist. prof.	1627	55%	1867	57%	1227	50%	
Professors	987	34%	1040	32%	1013	41%	
Total:	2933	100%	3253	100%	2453	100%	

Staff members, during the meeting with the EVPG, confirmed that there is a high pressure workload and overload of activities that lead to stressful work overtime. Apart from higher salary requirements, staff in particular wish for less workload and admin pressures. During the evaluation visit, they also expressed dissatisfaction for unpaid overtime hours and no reward bonus or even performance review systems. Thus the department should consider to deploy motivating factors for the staff in terms of: i) providing more time available for research, ii) reducing teaching loads and iii) securing more financial support for conferences, workshops and other similar activities' (e.g. pedagogic seminars) attendance and participation. Professional and personal development should also be encouraged and financially supported through memberships in national and international informatics societies, special interest scientific groups, trade unions and professional associations (CEPIS, IEEE, ACM, IEE), and other.

These above-mentioned suggestions can: a) greatly support and improve the competencies of the teaching and research staff and b) strengthen their international experiences even more. Thus, it is important to note that, without the support of the management team in this respect, the stability of a job position alone cannot be a factor of commitment and motivation to further personal and professional development and staff job satisfaction.

Teaching staff members, on the other hand, should also take initiatives to efficiently re-organize their time allocation to various duties, by themselves. This can happen by personally choosing the most appropriate teaching and learning approaches and research methodologies for their own work. As an example, the following suggestion is next provided: during the visit it was mentioned that some lecturers aspire the Problem-Based Learning (PBL) principles and apply them in their teaching and research. This could further be encouraged among other staff members too, because PBL can help integrate research and teaching, increase reflection and re-arrange time/duties allocation effectively.

It seems that the hierarchical structure and culture of the faculty/university with centralization and control can create some tension conflicts among the staff members. Very few of the staff members seem to prefer and enjoy the hierarchical culture of ways of working with high staff performance rates. Other staff members prefer task focus, clarity and job efficiency along with flexibility, autonomy, and participation in decision making. Even creative research projects and innovation initiatives for growth seem to disinterest many staff members and they view these as stressful and time-consuming involvement. This, of course, relates to the heavy teaching load they have. If there are no internal feedback mechanisms and quality procedures among the staff for exchanging feedback and approving improvement actions based on at least representative and consensus participation, no mission or vision strategies will be supported; nor, eventually, realized.

Internal feedback mechanisms and quality procedures among staff members could bring valuable exchanged feedback and other opinions for different teaching and learning methods and tools, research results and potential application/applicability, and other issues. Feedback through teaching/tutorial observations can enrich the lecturers' experiences, enhance the staff relations and increase the teaching quality. There does not seem to exist an adequate support-mentoring scheme for the new staff regarding teaching load and other duties. The opinions at least of the most recently recruited staff seem to support the need for having such a scheme and thus the department needs to introduce one. The older and more experienced members of staff could be good mentors/coaches for the new members of staff and provide invaluable advice and support.

An anonymous survey on staff's job satisfaction could enrich all the above observations and could give the necessary data to the administrative and management staff for action for improvement and necessary changes and/or reforms.

4. Facilities and learning resources

Overall, the premises for studies, buildings, classrooms, laboratories, library and the teaching and learning equipment are adequate in terms of quantity, size and quality and provide appropriate access to people with disabilities.

Classrooms are equipped with computers and projectors. Library opening hours are considered both adequate and convenient (Monday-Thursday 08.00-20.00, Friday 08.00-18.00 and Saturday 09.00-16.00). Access to public Internet space and restricted data bases is provided. Teaching materials (textbooks, books, periodical publications, databases) are adequate and accessible. Computer Labs are equipped with modern computers. Computer equipment and the network are

sufficient, properly administered and secured. Internet connection is sufficient and wireless network is accessible through the premises. There is a diversity of equipment, technology platforms and software available for the students.

The premises/facilities include a very good Innovation and Business Center, as well a very good e-learning Unit, both providing resources that enhance the teaching/learning experience of the teaching staff and students.

The main recommendation of the EVPG with regards to the facilities and learning resources is for the department to keep modernizing and improving the facilities and resources available to the students and teaching staff. Furthermore, in order to promote and support Problem Based Learning (PBL) and collaborative work, there is a need to further improve the availability of space that supports this kind of learning activities. Finally, in order to solicit feedback from all users, the department could carry out an annual questionnaire requesting feedback with regards to the facilities and resources.

5. Study process and student assessment

In general, the study process ensures an adequate provision of the programme and the achievement of the intended learning outcomes. The admission requirements are well founded. However, admission numbers have fallen dramatically and urgent action needs to be taken to rectify this. The EVPG suggests promoting the study programme in schools, as well as organising events at the university and inviting school career counsellors, so as to attract more students. Furthermore, the development of clearer programme description in both printed and electronic form (through the website) would help attracting more students. Offering the programme in English would also help in recruiting international students and create an international environment for home students.

Students, who participated in meetings, appeared not to be very clear with regards to their career prospects but this to some extent can be attributed to the lack of clear programme description (as pointed before). The existence of an active career office/system at the university/faculty could help students to have a clearer view.

Students have opportunities to participate in student mobility programmes. However, as stated in the SER and confirmed during the meetings, students of this study programme do not participate in mobility programmes because the majority of them have jobs and/or their proficiency in foreign languages is low. So the EVPG recommends further promoting mobility programmes and encouraging students to participate by talking about the benefits of these programmes, how

they can help students' careers, how they can improve their learning and language skills and how the exposure to other societies and cultures can help them to develop social skills.

The EVPG was pleased to note the existence of an Innovation and Business Center at the University that allows students to participate in business start-up initiatives. More effort however needs to be put in order to engage students in research activities. To this end, the teaching staff is encouraged to engage students in their research projects (through the final year thesis and/or the practicum in industry which can be linked to state-of-the-art research).

The EVPG was also pleased to note the existence of a very good e-learning Unit that provides support to teaching staff in developing e-material. Students reported however that their teachers use different platforms for delivering e-learning material. The EVPG suggests that the department streamlines the delivery of e-learning material by introducing unified rules for the teaching staff to make use of a single e-learning system systematic and obligatory.

The assessment system of students' performance is clear, adequate and publicly available. However there is room for improvement, especially with regards to the feedback received on student work. Students reported that in some cases they do not receive any written feedback on their assignments/projects but only the marks/grades. Furthermore there is a need to strengthen the link between the students and their representative so as to formally provide input to the department.

In general the department is recommended to enhance the students learning experience by promoting further a student-centred learning environment. To this end, Problem Based Learning (PBL), collaborative work, exposure to research and use of real life case studies should be used. Furthermore, in order to improve the students' social and soft skills, as well as language, communication and presentation skills, students should be encouraged to participate in out-of-class social activities organised by the department/faculty/university. Finally, student support centres should provide either staff-led or student-led tutorials to weak students.

6. Programme management

As per the SER, the self-evaluation group responsible for drafting the SER consists of 5 members including one student and one social partner representative. Each of the other three members belongs to one of the three departments involved in the offering of the study programme and thus all departments had representation in the group.

Programme management at KTU is administered and coordinated by the Vice Rector of Studies and Department of Studies, responsible for the formation of Study Programme Committees (SPC). The SPC is the main body responsible for study programme review, assessment, quality assurance and enhancement. The SPC provides recommendations to the three departments offering the programme, the Faculty Board and the Senate Study Committee. One would expect that the Faculty Board would have an increased responsibility with regards to the offering of inter-departmental programmes such as the one under evaluation.

The 15-members SPC for the Bachelor Degree in Informatics includes highly ranked professors (including the Dean of Faculty), social/industry partner and a student representative delegated from the Faculty Student Union. One however may question the balance of the members of the committee as 86% of the committee members are internal professors and only 7% (one member) is a social partner and 7% (one member) is a student. One could argue that the SPC could include two representatives from social partners and two students.

As per the SER, curriculum is reviewed both at the study subject level as well as at the programme level every year and is presented to the Faculty Board for approval. Each subject of the programme has a co-coordinating lecturer responsible for it. All changes are approved hierarchically by the faculty and Senate and the relevant Study/Quality Committees.

Lecturers are evaluated every five years by the Accreditation and Contest Commissions of KTU according to Law provisions. They are also evaluated every semester by students through a survey carried out by KTU Study Service. The results of the student surveys are also made available to the SPC, the departments, the faculty and the Student Union. Round table discussions are organized with students so that they can provide face-to-face feedback and actions are taken based on the discussions.

Thus, at least on paper it seems that there is a well-structured hierarchical system providing at different levels quality assurance. The process is regulated by various policy documents of the University.

The finding of the EVPG during the site visit however, revealed that the whole process of programme management is not carried out effectively enough and in accordance with all the written rules and regulations. To this end, the following observations were made:

1. The teaching staff is not really actively involved in study programme management and review. The main role of teaching staff is to review and update the course syllabi. The decisions for changes/improvements in study programmes are taken at a higher level

(Dean, Heads of department and Coordinators of study programmes). Thus there is very little communication between the management team of the faculty/departments and the teaching staff. This communication indeed is limited not only with regards to programme management but with regards to most issues concerned with staff (research, teaching loads, staff development, etc.). To this end, the faculty and the department need to address seriously this issue and engage more the teaching staff in the decision-making processes.

2. With regards to the social partner's participation in the preparation of the SER, it seemed that he provided no input. He appeared to be confused in relation to the concept of competences. Furthermore, during the meeting with the social partners, it was revealed that social partners did not know who their representative was in the self-evaluation group. Thus no formal meeting took place between the social partners themselves and with the department and/or their representative to provide formal input. It seems that all input provided is on an informal and ad-hoc basis. Although, social partners/employers provide input to the programme, through various collaboration agreements allowing student placement/activities in companies, employment of graduates, guest lectures and some limited research collaborations, they expect more initiatives from the university (e.g. investment of joint ventures). The social partners identified the need for improving the language skills, social and soft skills, as well as presentation and communication skills of the students. As a conclusion, the implementation of the whole process of engaging the social partners in programme review and management needs to be revised.
3. The student representative in the self-evaluation group did not have any formal meetings with his colleagues in order to formally receive, record and provide input to the group. However, as pointed out during the meetings, students do provide input through questionnaires that they fill at the end of every semester, though no formal feedback is given to them with regards the input they provide and any action taken.
4. Alumni reported that teaching staff should be more up-to-date with current and state-of-the-art developments. This can be achieved by strengthening the links with industry and providing staff development opportunities and funding.

III. RECOMMENDATIONS

1. The faculty is recommended to re-examine its structure and its departments, as well as the co-operation of the departments in jointly offering study programmes and carrying out research activities.

2. The faculty and the departments are recommended to co-operate more, especially since the first two years of all the programmes offered are common and some courses of the last two years are also shared by all programmes. To this end, the aims and objectives, learning outcomes, profiles and descriptions of the programmes need to be revisited and addressed using a modular approach and in co-operation with the other departments. These should be clearer in all reports and publications leaflets (as well as the website).

3. The faculty is recommended to really encourage and engage the teaching staff in all activities of the department and faculty and especially in the decision making process. Thus, more power and at the same time responsibility, should be given to the teaching staff and the various boards. To this end, a better communication channel should also be established between teaching staff and the management team. The faculty and the department are also recommended to have a suitable recruitment policy to attract competent personnel from any minorities, including women.

4. The faculty and the department are recommended to provide a better work environment for the teaching staff (reduced teaching load, funding for research, conference participation and staff development). To this end, the faculty is recommended to carry out regularly a job satisfaction questionnaire.

5. At the same time, the teaching staff is recommended to take more initiatives and actively engage in all academic community activities. Teaching staff should further engage in curriculum development, funding applications (Horizon 2020) and research collaborations.

6. The department is recommended to define more precisely the identity, rationale, intended learning outcomes, structure and course pre-requisites graph/tree of the *Informatics* Bachelor study programme. So, either an appropriate name should be chosen for the programme or the flexibility of the programme should be increased. The description of the programme has to be changed, not only in the sense to reflect the new structure. The description should represent the programme as an attractive opportunity to students. Trivially, there has to be also a convincing English version. The revised/enhanced programme and its description should be closer to the *standards* of an *internationally*

visible, research-oriented university, according to the vision of KTU. So, especially, research-orientation, internationalization, flexibility, and adaptability for individual study plans should be made clearer.

7. The department is recommended to enhance the curriculum of the study programme with courses addressing state-of-the-art topic areas such as: Service Oriented Systems, IT as a Service, Virtualization and Cloud Computing.
8. The department is recommended to streamline the delivery of e-learning material by introducing unified rules for the teaching staff to make use of a single e-learning system systematic and obligatory. Furthermore, the department could encourage the staff to utilize the services of the e-learning Unit and provide some incentives to staff (e.g. time release) for developing through the Unit professional e-learning material.
9. The department is recommended to carry out an annual questionnaire requesting feedback from both students and staff, with regards the facilities and resources in order to maintain the standards of the available resources.
10. The department is recommended to provide a better student-centred learning environment. To this end, Problem Based Learning (PBL), collaborative work within courses, linking of final year thesis and industry practicum/placements with the research work of the teaching staff and the use of real-life case studies should be further promoted. Appropriate space should also be made available to promote and support such learning activities. Furthermore, the learning process should be improved, especially with regards to providing feedback to students for their assignments and exams and in general the formal communication between students and the department should be enhanced. Finally, in order to improve the students' social and soft skills, as well as language, communication and presentation skills, students should be encouraged to participate in out-of-class social activities organised by the department/faculty/university.
11. The department is recommended to further develop their quality assurance mechanisms and especially to audit the adherence to the rules and regulations so as the programme review/management process is carried out regularly and its results are formally recorded. The department is therefore recommended to set up formal arrangements through which all stakeholders are actively and meaningfully involved and their input is formally recorded and analysed and any actions taken communicated back to them.

IV. SUMMARY

Overall the External Evaluation Peer Group (EVPG) identified a general problem at the organizational and structural level of the faculty and its departments. Although the number of departments has been recently reduced though merging of departments, the EVPG believes that the structure of the faculty needs to be re-addressed. There seems to be lack of co-operation between the departments and lack of communication at the faculty and departmental level between the top management team and the teaching staff. Furthermore, teaching staff seemed to be distant/not engaged in the developments/changes taking place at the faculty, departments and study programmes and they take no part in decision making. The faculty and the department need to look into these issues.

The *Informatics* study programme provides a useful first-cycle qualification. The dramatic declining number of students however, is very worrying and needs to be addressed urgently. The intended learning outcomes of the study programme are in line with the requirements of the sixth level of the European Qualifications Framework, however they need to be clearly defined and expressed, especially in comparison with the intended learning outcomes of the other study programmes offered by the faculty.

The identity, rationale, intended learning outcomes, structure and course pre-requisites graph/tree of the study programme need to be revised in comparison to the other study programmes of the faculty. An appropriate name should be chosen for the programme or the flexibility of the programme should be increased. The curriculum should be enhanced with courses addressing state-of-the-art topic areas such as: Service Oriented Systems, IT as a Service, Virtualization and Cloud Computing, as well to build in students' language and soft skills. Finally, the description of the programme needs also to be clearer in all reports and publications leaflets (as well as on website).

The study programme is provided by staff meeting legal requirements and their qualifications are adequate to ensure the achievement of the programme and courses intended learning outcomes. Overall, staff members of the programme are pedagogically equipped and scientifically competent, having a Ph.D. degree in their own research field. The staff-student ratio (1:7) is one of the positive aspects of the study programme, though this is due to the drastic decrease in the number of students. There are almost no women among the staff and their absence from the higher management positions and professorships is notable. An obvious recommendation here would be to have a suitable recruitment policy to attract competent personnel from any minorities, including women. The department is also recommended to improve the work

conditions of staff by reducing teaching loads and providing incentives and financial support for research, participation in conferences and professional development. Finally the teaching staff is also recommended to take more initiatives and further engage in international research projects/collaborations and publish in international fora.

The premises for studies, buildings, classrooms, laboratories, library and the teaching and learning equipment are more than adequate both in their quantity, size and quality; all are accessible by students with disabilities. The classrooms, library and Computer labs are all well equipped. Computer equipment and the network are sufficient, properly administered and secured. Internet connection is sufficient and wireless network is accessible through the premises. There is a diversity of equipment, technology platforms and software available for the students. The premise/facilities include a very good Innovation and Business Center as well a very good e-learning Unit. The department is recommended to keep modernizing and improving the facilities and resources and to provide additional appropriate space for collaborative learning activities.

The study process ensures an adequate provision of the programme and the achievement of the intended programme and course learning outcomes. The admission requirements are well founded. Students have opportunities to participate in student mobility programmes, although for various reasons students do not participate in such programmes. The Innovation and Business Center at the University allows students to participate in business start-up initiatives. More effort however needs to be put in order to engage students in research activities. The e-learning provision needs to be streamlined so that students are exposed to one e-learning platform and e-learning approach. The assessment system of students' performance is clear, adequate and publicly available. However there is room for improvement, especially with regards to the feedback received on students work. In general, the department is recommended to enhance the students learning experience by promoting further the student-centred learning environment. To this end, Problem Based Learning (PBL), collaborative work, participation of students in research projects of teaching staff and usage of real life case studies should be enhanced.

The study programme is managed and reviewed according to documented standard and established methods and techniques that involve all stakeholders, namely, teaching staff, students, alumni and employers. However this does not seem to happen adequately and in a formal and systematic way and within the framework of established rules, regulations and procedures. Any feedback received from stakeholders and actions taken based on this are not formally recorded and communicated to them. It was evident that teaching staff, social

partners/employers, students and alumni are not adequately actively and meaningfully involved in study programme review and improvement. The department is thus recommended to further develop programme management and review process, as well as the quality assurance mechanisms and to have an auditable system in place.

V. GENERAL ASSESSMENT

The study programme *Informatics* (state code – 612I10004) at Kaunas University of Technology is given **positive** evaluation.

Study programme assessment in points by evaluation areas.

No.	Evaluation Area	Evaluation Area in Points*
1.	Programme aims and learning outcomes	2
2.	Curriculum design	2
3.	Staff	2
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)	2
	Total:	**15**

*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. Philippos Pouyioutas
Grupės nariai: Team members:	Prof. Manfred Nagl
	Dr Eleni Berki
	Mr Adomas Svirskas
	Mr Justinas Petravičius

KAUNO TECHNOLOGIJOS UNIVERSITETO PIRMOSIOS PAKOPOS STUDIJŲ PROGRAMOS *INFORMATIKA* (VALSTYBINIS KODAS – 612I10004) 2014-01-17 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-41 IŠRAŠAS

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Kauno technologijos universiteto studijų programa *Informatika* (valstybinis kodas – 612I10004) vertinama **teigiamai**.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	2
2.	Programos sandara	2
3.	Personalas	2
4.	Materialieji ištekliai	4
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	2
	Iš viso:	**15**

* 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)

IV. SANTRAUKA

Ekspertų grupė identifikavo bendrą fakulteto ir jam priklausančių katedrų organizacinio ir struktūrinio lygmens problemą. Nors neseniai katedrų skaičius buvo sumažintas jas sujungus, ekspertų grupė mano, kad fakulteto struktūra turėtų būti iš naujo peržiūrėta. Ekspertų grupės nuomone, katedros nepakankamai bendradarbiauja, taip pat trūksta aukščiausio lygio administracijos darbuotojų ir dėstytojų bendravimo fakulteto ir katedrų lygmenimis. Be to, anot ekspertų grupės, dėstytojai yra atitolę / neįtraukiami į fakulteto, katedrų ir su studijų programomis susijusius patobulinimus / pokyčius bei nedalyvauja priimant sprendimus. Fakultetas ir katedros turėtų spęsti šiuos probleminius klausimus.

Informatikos studijų programa yra suteikiama naudinga pirmosios studijų pakopos kvalifikacija. Vis dėlto nerimą kelia dramatiškai mažėjantis studentų skaičius ir šią problemą reikia spręsti kuo skubiau. Studijų programos numatomi studijų rezultatai atitinka Europos kvalifikacijų sąrangos šeštojo lygmens reikalavimus, tačiau jie turėtų būti aiškiai apibrėžti ir pateikti, ypatingai lyginant su kitų fakulteto siūlomų studijų programų numatomais studijų rezultatais.

Turėtų būti peržiūrėtas studijų programos identitetas, pagrįstumas, programos numatomi studijų rezultatai, struktūra ir studijų dalykams taikomi išankstiniai reikalavimai (grafikas / medis) lyginant su kitomis fakulteto studijų programomis. Taip pat turėtų būti pasirinktas tinkamas programos pavadinimas arba padidintas studijų programos lankstumas. Siekiant patobulinti studijų programos sandarą turėtų būti įtraukiamas studijų dalykų, orientuotų į tokias šiuolaikines temas: į paslaugas orientuotos sistemos, IT kaip paslauga, virtualizacija ir debesų kompiuterija dėstymas, taip pat tobulinami studentų kalbos ir kiti ne techninio pobūdžio gebėjimai. Galiausiai, visose savianalizės suvestinėse (įskaitant ir kitas vertintas studijų programas) ir informaciniuose lankstinukuose (taip pat ir interneto svetainėje) turėtų būti pateikiamas aiškesnis studijų programos aprašas.

Studijų programoje dėsto personalas, atitinkantis teisės aktų reikalavimus, jų kvalifikacija yra pakankama programos ir studijų dalykų numatomiems studijų rezultatams pasiekti. Apskritai, programoje dėstantis akademinis personalas tiek pedagoginiu, tiek ir moksliniu aspektais yra kompetentingas. Pažymėtina, kad dėstytojai yra įgiję mokslo daktaro laipsnį srityje, kurioje vykdo mokslinius tyrimus. Dėstytojų ir studentų santykis (1:7) yra vienas iš teigiamų studijų programos aspektų, nors tokią situaciją lemia drastiškai sumažėjęs studentų skaičius studijų programoje. Atkreiptinas dėmesys, kad tarp dėstytojų beveik nėra moterų, taip pat yra pastebimas ir jų nebuvimas aukštesniojo rango vadovų pareigose bei tarp profesorių. Akivaizdi rekomendacija šiuo atveju būtų vykdyti atitinkamą įdarbinimo politiką, kuri leistų pritraukti kompetentingą personalą iš mažumų grupių, įskaitant ir moteris. Katedrai taip pat rekomenduojama gerinti dėstytojų darbo sąlygas mažinant dėstymo krūvį, taip pat skatinant bei teikiant finansinę paramą vykdyti mokslinius tyrimus, dalyvauti konferencijose ir tobulintis profesinėje srityje. Galiausiai, dėstytojams taip pat rekomenduojama imtis daugiau iniciatyvos ir toliau dalyvauti tarptautiniuose mokslinių tyrimų projektuose bei publikuoti tarptautinėje erdvėje.

Studijoms skirtos patalpos, pastatai, auditorijos, laboratorijos, biblioteka ir mokymo bei studijų įranga yra daugiau nei pakankami kiekio, apimties ir kokybės atžvilgiu. Visi ištekliai yra pritaikyti studentams su negalia. Auditorijos, biblioteka ir kompiuterių laboratorijos yra gerai įrengtos ir aprūpintos. Kompiuterinė įranga ir tinklas yra pakankami, tinkamai administruojami ir saugūs. Interneto ryšys yra pakankamas. Bevielis interneto ryšys veikia visose patalpose. Įranga, technologijų platformos ir programinė įranga yra įvairi ir prieinama studentams. Universitete veikia labai pozityviai vertintini Inovacijų ir verslo centras ir E-mokymosi centras. Katedrai rekomenduojama ir toliau tęsti materialiųjų išteklių modernizavimą ir gerinimą bei skirti papildomas tinkamas patalpas bendradarbiavimu pagrįstų studijų vykdymui.

Studijų procesas užtikrina tinkamą programos vykdymą ir numatomų programos ir studijų dalykų studijų rezultatų pasiekimą. Priėmimo reikalavimai yra tinkamai nustatyti. Studentams yra suteikiamos galimybės dalyvauti judumo programose, tačiau dėl įvairių priežasčių studentai tokiose programose nedalyvauja. Inovacijų ir verslo centras universitete suteikia studentams galimybę dalyvauti verslo kūrimo iniciatyvose. Vis dėlto turėtų būti dedama daugiau pastangų siekiant skatinti studentus dalyvauti mokslo tiriamojoje veikloje. E-mokymosi sistema turėtų būti suderinta, kad studentai naudotųsi vieninga e-mokymosi platforma ir e-mokymosi požiūriu. Studentų pasiekimų vertinimo sistema yra aiški, tinkama ir viešai prieinama. Tačiau pažymėtina, kad šiuo atžvilgiu vis dar yra ką tobulinti, ypatingai grįžtamojo ryšio apie studentų atliktą darbą teikimo atžvilgiu. Apskritai, katedrai rekomenduojama plėtoti studentų mokymosi patirtį toliau kuriant į studentą orientuotų studijų aplinką. Siekiant šio tikslo, reikėtų skatinti probleminį mokymąsi, darbą kartu, studentų dalyvavimą dėstytojų mokslinių tyrimų projektuose, ir mokymo/-osi procese naudoti pavyzdžius iš realaus gyvenimo.

Studijų programa vykdoma ir peržiūrima atsižvelgiant į dokumentuose nustatytus standartus, metodus bei priemones, kurie įtraukia visus socialinius dalininkus, t. y. dėstytojus, studentus, absolventus ir darbdavius. Vis dėlto šis procesas nevyksta be tam tikrų trūkumų – formaliai ir sistemingai, pagal nustatytas taisykles, reglamentus ir procedūras. Iš socialinių dalininkų gautas grįžtamasis ryšys ir veiksmai, kurių buvo imtasi juo remiantis, nėra formaliai įtvirtinami; suinteresuotosios šalys nėra apie tai informuojamos. Akivaizdu, kad dėstytojai, socialiniai partneriai / darbdaviai, studentai ir absolventai nėra aktyviai ir prasmingai įtraukiami į studijų programos peržiūrėjimo ir tobulinimo procesą. Todėl katedrai rekomenduojama toliau tobulinti studijų programos vadybą ir vertinimo procesą, taip pat kokybės užtikrinimo mechanizmus ir garantuoti patikrinamos sistemos buvimą.

III. REKOMENDACIJOS

1. Fakultetui rekomenduojama peržiūrėti savo struktūrą ir katedras, taip pat bendradarbiavimą tarp katedrų bendrai siūlant studijų programas ir vykdant mokslo tiriamąją veiklą.

2. Fakultetui ir katedroms rekomenduojama glaudžiau bendradarbiauti, ypatingai atsižvelgiant į tai, kad visų vykdomų studijų programų pirmieji dveji studijų metai yra bendri, o taip pat ir kai kurie paskutiniųjų dviejų metų studijų dalykai sutampa. Dėl šios priežasties studijų programų tikslai, ir uždaviniai, numatomi studijų rezultatai, profiliai ir aprašai turėtų būti peržiūrėti ir pertvarkyti laikantis modulinio požiūrio ir bendradarbiaujant su kitomis katedromis. Jie turėtų būti aiškiau pateikiami visose

savianalizės suvestinėse ir informaciniuose lankstinukuose (įskaitant ir interneto svetainę).

3. Fakultetui rekomenduojama skatinti dėstytojus įsitraukti į visas katedros ir fakulteto veiklas, o ypatingai į sprendimų priėmimo procesą. Šiuo tikslu, dėstytojams ir įvairiems struktūriniams daliniams turėtų būti suteikta daugiau įgaliojimų ir tuo pačiu atsakomybės bei turėtų būti užtikrinamos geresnės bendradarbiavimo sąlygos tarp dėstytojų ir vadovybės. Fakultetui ir katedrai taip pat rekomenduojama vykdyti tinkamą įdarbinimo politiką, kuri leistų pritraukti kompetentingą personalą iš įvairių mažumų grupių, įskaitant ir moteris.

4. Fakultetui ir katedrai rekomenduojama sukurti geresnę darbo aplinką dėstytojams (sumažinti darbo krūvį, finansuoti mokslinius tyrimus, dalyvavimą konferencijose ir profesinį tobulėjimą). Siekiant šio tikslo, fakultetui rekomenduojama parengti pasitenkinimo darbu klausimyną ir reguliariai atlikti apklausas.

5. Tuo pat metu dėstytojams rekomenduojama imtis daugiau iniciatyvos ir aktyviai dalyvauti akademinės bendruomenės veikloje. Dėstytojai turėtų ir toliau dalyvauti tobulinant studijų programą, teikti paraiškas dėl finansavimo („Horizontas 2020“) ir bendradarbiauti vykdant mokslinius tyrimus.

6. Katedrai rekomenduojama aiškiau apibrėžti *Informatikos* bakalauro studijų programos tapatybę, pagrįstumą, numatomus studijų rezultatus, struktūrą bei studijų dalykams studijuoti būtinas sąlygas (grafikas / medis). Taigi, arba turėtų būti pasirinktas tinkamas studijų programos pavadinimas, arba programai turėtų būti būdingas didesnis lankstumas. Studijų programos aprašas turėtų būti pakeistas, ne tik siekiant atspindėti naują struktūrą, aprašas turėtų reprezentuoti programą, kaip patrauklią galimybę studentams. Taip pat turėtų būti parengta įtikinama versija anglų kalba. Peržiūrėta / patobulinta studijų programa ir jos aprašas, atsižvelgiant į KTU viziją, turėtų labiau derėti prie *tarptautiniu mastu matomo, į mokslinius tyrimus orientuoto universiteto* standartų. Atkreiptinas dėmesys, kad aiškesniais turėtų tapti orientacija į mokslinius tyrimus, internacionalizacija, lankstumas ir gebėjimas prisitaikyti prie individualių studijų planų.

7. Katedrai rekomenduojama patobulinti studijų programos sandarą papildant ją studijų dalykais, kurie būtų orientuoti į šiuolaikines temas, tokias kaip į paslaugas orientuotos sistemos, IT kaip paslauga, virtualizacija ir debesų kompiuterija.

8. Katedrai rekomenduojama racionalizuoti e-mokymosi medžiagos pateikimą, nustatant dėstytojams vieningas taisykles sistemingai ir privalomai naudotis vieninga e-mokymosi sistema. Be to, katedra galėtų skatinti dėstytojus pasinaudoti E-mokymosi centro paslaugomis ir inicijuoti dėstytojų (pvz., laiko skyrimas) talpinamos profesinės medžiagos tobulinimą naudojantis Centru.

9. Katedrai rekomenduojama vykdyti metinę apklausą orientuotą į studentų ir dėstytojų grįžtamojo ryšio teikimą apie materialiają bazę, siekiant užtikrinti turimų išteklių atitikimą standartams.

10. Katedrai rekomenduojama geriau užtikrinti į studentą orientuotų studijų aplinką. Siekiant šio tikslo, turėtų būti toliau skatinama taikyti probleminį mokymąsi, komandinį darbą, susieti baigiamuosius darbus ir praktikas / stažuotes su dėstytojų mokslo tiriamuoju darbu ir realiais pavyzdžiais iš gyvenimo. Reikėtų sukurti sąlygas (erdvės aspektas) skatinti ir remti tokią studijų veiklą. Be to, turėtų būti patobulintas studijų procesas, ypatingai grįžtamojo ryšio apie studentų atliktas užduotis bei egzaminus teikimo atžvilgiu, taip pat turėtų būti sustiprintas formalus studentų ir katedros bendravimas. Galiausiai, siekiant tobulinti studentų socialinius ir kitus ne techninius gebėjimus, taip pat kalbos, bendravimo ir pristatymo įgūdžius, studentus reikėtų skatinti dalyvauti socialinėje veikloje, kurią po paskaitų organizuoja katedra / fakultetas / universitetas.

11. Katedrai rekomenduojama toliau tobulinti kokybės užtikrinimo mechanizmus, ypač daug dėmesio skiriant peržiūrėjimui, kaip laikomasi nustatytų taisyklių ir reglamentų, siekiant užtikrinti, kad programos peržiūrėjimo / vadybos procesas būtų vykdomas reguliariai, o jo rezultatai būtų oficialiai įforminami. Todėl katedrai rekomenduojama įtvirtinti formalius susitarimus, kurių pagalba visos suinteresuotosios šalys būtų labiau įtraukiamos į studijų kokybės užtikrinimą, jų teikiamas grįžtamasis ryšys oficialiai fiksuojamas ir analizuojamas bei joms būtų pranešama apie visus veiksmus, kurie buvo atlikti.

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Paslaugos teikėjas patvirtina, jog yra susipažinęs su Lietuvos Respublikos baudžiamojo kodekso[1] 235 straipsnio, numatančio atsakomybę už melagingą ar žinomai neteisingai atliktą vertimą, reikalavimais.

[1] Žin., 2002, Nr.37-1341.