



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

KAUNO TECHNOLOGIJOS UNIVERSITETO
STUDIJŲ PROGRAMOS INFORMACINIŲ SISTEMŲ
INŽINERIJA (621E15001)
VERTINIMO IŠVADOS

EVALUATION REPORT
OF Information Systems Engineering (621E15001)
STUDY PROGRAMME
at ***KAUNAS UNIVERSITY OF TECHNOLOGY***

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Išvados parengtos anglų kalba
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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	Informacinių sistemų inžinerija
Valstybinis kodas	621E15001
Studijų sritis	Technologijos mokslų studijų sritis
Studijų kryptis	Informatikos inžinerija
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Antroji
Studijų forma (trukmė metais)	Nuolatinė (2 metai)
Studijų programos apimtis kreditais	120 ECTS
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Informatikos inžinerijos magistras
Studijų programos įregistravimo data	2007-11-07, Įsak. Nr. ISAK-2166

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	Information Systems Engineering
State code	621E15001
Study area	Technological sciences
Study field	Informatics Engineering
Kind of the study programme	University Studies
Study cycle	Second
Study mode (length in years)	Full-time (2 years)
Volume of the study programme in credits	120 ECTS
Degree and (or) professional qualifications awarded	Master of Informatics Engineering
Date of registration of the study programme	Order No. ISAK-2166, November 7 th , 2007

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The Centre for Quality Assessment in Higher Education

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I. INTRODUCTION

The procedures of the external evaluation of the Kaunas University of Technology (hereafter, KTU) Information Systems Engineering Masters study programme were initiated by the Centre for Quality Assessment in Higher Education of Lithuania nominating the external evaluation peer group formed by the head, Professor Roland Ibbett (Emeritus Professor of Computer Science, University of Edinburgh, Scotland and Chair of the Accreditation Committee of the European Quality Assurance Network for Informatics Education (EQANIE)), Professor Jürgen Dorn (Vienna University of Technology, Vienna, Austria), Professor José Luiz Fiadeiro (Royal Holloway University of London, England), Simonas Razminas (Organization Coach, UAM AdForm, Lithuania), employer representative and Paulius Varonenka (Vilnius University, Lithuania), student representative. For the evaluation the following documents have been considered: Law on Higher Education and Research of Republic of Lithuania; Procedure of the External Evaluation and Accreditation of Study Programmes; Methodology for Evaluation of Higher Education Study Programmes; 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 and the site visit of the expert group to KTU on 14 May 2014. The visit incorporated all required meetings with different groups: the administrative staff of the KTU, staff in the Faculty of Informatics responsible for preparing the self-evaluation documents, teaching staff, students of all years of study, graduates and employers. The expert group evaluated various support services (classrooms, laboratories, library, computer facilities), examined students' final works, and various other materials. After the expert group discussions and additional preparations of conclusions and remarks, introductory general conclusions of the visit were presented. After the visit, the group met to discuss and agree the content of the report, which represents the expert team's consensual views.

KTU traces its origins back to 1922 as part of the University of Lithuania, later Vytautas Magnus University. Following various re-organisations, the Kaunas Polytechnic Institute was formed in 1950 and, in 1990, KPI became the Kaunas University of Technology. KTU is organised into 12 Faculties, together with a number of institutes, service departments and administrative offices. The Faculty of Informatics is made up of five departments: Applied Informatics, Computer Science, Information Systems, Multimedia Engineering and Software Engineering.

The MSc in Information Systems Engineering, established in 2007, is organised by the Department of Information Systems. The aim of the programme is to prepare high level professionals who can systemically analyse the informational needs of both people and organisations and who can design, implement and evaluate computerised information systems using state-of-the-art information technologies. Student numbers, which averaged 29 in the period 2008-2013, declined to a low point of 18 in 2012 but now seem to be recovering.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

The 2-year/120 ECTS master study programme in Information Systems Engineering is motivated by the need for information systems engineering specialists in Lithuania. Evidence is given in the SER by referencing Lithuanian documents that predict a lack of professionals in the IT domain. Also European documents are referenced showing similar needs. During the visit the social partners confirmed the need for IT specialists, though not necessarily only those who graduate from programmes such as this one.

The aim of the study programme is to educate students who are able to develop information systems. The aims are related to the first cycle programme on Information Systems, but are oriented more towards technological aspects. In general, the aims and learning outcomes are appropriate for a second cycle study, because several outcomes are at the forefront of the IS development area and the understanding of the principles of project and change management are addressed. At the moment about 20 students are studying per year, but staff would be interested in attracting more students.

The aims are achieved by 22 learning outcomes divided into four groups: "Underlying Conceptual Basis", "Analysis, Design and Implementation", "Technological and Methodological Skills" and "Other Professional Skills". These groups are consistent with the Euro-Inf Framework standards. In a matrix, the learning outcomes are assigned consistently and in great detail to courses of the study programme. Some courses in the study programme are related to semantic knowledge and knowledge-based systems. Competences gained typically in such courses are not mentioned as learning outcomes. The social partners supported the learning outcomes during the visit. However, operational aspects of IT such as IT service management are neither considered in the learning outcomes nor in the curriculum.

The study programme is published in the Web in Lithuanian and English. Students have further access through an internal information system. All applicable Lithuanian laws were satisfied. The name of the study programme is compatible with the aims and content of the study.

2. Curriculum design

The study programme consists of 120 ECTS, 30 in each semester. The programme consists of 66 ECTS in Informatics Engineering, 6 ECTS elective courses and 54 ECTS for the final degree project preparation. This division is consistent with Lithuanian law.

Although no explicit pre-requisites are specified for this study programme, the typical learning outcomes of an IT first cycle programme are expected. The focus in the programme is on project-oriented work, enterprise modelling and databases. The courses are arranged in a sequence reflecting the different phases of a software project. Thus in the first semester requirements analysis, in the second design and in the third semester implementation and testing are the main contexts. Since students also have to start their final project in the first semester, the design of the programme supports the project-oriented approach.

A considerable part of the study programme consists of courses related to semantic modelling, semantic representation and semantic processing. This is clearly at the forefront of the area of information systems engineering, although the need for these in professional information systems development is considered by the Panel to be of minor importance. Students complained during the visit that the programme content is too theoretical and that some technologies (e.g. for enterprise modelling) are not those that are typically applied in industry.

Students must select the topic for their final project in the first semester. On the one hand this motivates students in the other courses if they see what they need for the final project. On the other hand, it may be difficult for some students to select a topic in the first year. Probably this is easier for students who completed the Information Systems bachelor degree at KTU. During the visit, students attested that it is difficult to select an appropriate topic proposed by staff so early. However, in general it is a very reasonable approach and only small changes should be advised.

It is recommended that the content of the courses be revised to reflect more recent technologies as applied in industry.

3. Staff

The numbers and qualifications and experience of the staff involved in teaching the Information System Engineering programme satisfy the appropriate regulations and are more than adequate to ensure that the intended learning outcomes of the programme can be achieved by the students. The programme is delivered by 12 staff: 4 professors, 6 associate professors and 2 lecturers/assistants, all of whom have scientific (doctoral) degrees. Of these, 8 are in Department of Information Systems, 4 are from other departments in the Faculty (their affiliation is not given in the SER and there appear to be no staff lists on the University website; during the visit the Panel was assured that a new version of the website, currently under development, would include lists of staff for all departments).

Staff are recruited and appointed according to the appropriate regulations and there have been some changes in personnel during the evaluation period. It was however noticeable that virtually all those involved in this programme obtained all of their degrees at KUT. During the visit the Panel was assured that all vacant positions are offered publicly but were told that not only is there a shortage of suitably qualified informatics staff generally in Lithuania but also that most applicants tend to prefer to stay in the institution with which they are familiar. In relation to the 5-year re-certification of staff, the Panel was assured that staff were always diligent to ensure that they would satisfy the re-certification requirements.

There is a considerable emphasis on research in the Department, both individual and collaborative; during 2008-2013, more than half of the staff participated in externally funded projects (7 national and 5 international). All members of staff have good publication records, though only a few have publications in journals and conferences outside Lithuania. During the visit the Panel was assured that there were adequate funds to support attendance at conferences. Three of the staff involved with the programme from the Department of Information Systems have supervised doctoral students during the evaluation period, producing 8 doctoral graduates. Within the Faculty as a whole there are currently 30 PhD students.

The age distribution of the teaching staff (averaging 48.5 years) shows five people in the age range 30-40, two in the range 40-50, two aged 50-60 and three 60-70, so there is a good mix of younger and more experienced staff. Their teaching experience ranges from 1 to 39 years, though virtually all of this has been at KTU. Six members of staff list involvement in professional advancement activities (internships, seminars, courses) outside of Lithuania in recent years, with most others listing such activities within Lithuania. Many staff also list on their CVs relevant pedagogical material that they have produced. The Panel believes that it

would be helpful for more staff to be involved in activities that bring them into contact with staff in other institutions, especially through two-way international exchanges.

4. Facilities and learning resources

The Faculty of Informatics provides facilities for study programmes in three buildings located on the same campus. While this ensures that students can move between classrooms quite quickly, travelling between the buildings may introduce inconvenience for people with disabilities. On the other hand people with disabilities are provided with good access to premises in all the buildings the Panel visited (the Faculty of Technologies was not visited). Navigation between buildings and classrooms is not an easy task for newcomers, however, as room indicators and signage are not available or are hard to find. During the visit the Panel was informed that the research facilities and laboratories that are currently based in the Faculty building will be moved to a new building, whilst the study classrooms will remain in the Faculty building. This will have some impact of the time and distance students will need to travel between buildings but the Panel was assured that most of the new facilities will be freely accessible, and that students will be able to use them when required.

Most of the students bring their own computers, and while open areas in corridors have some power supply sockets, there are clearly not enough. Similarly the number of chairs, in these free zones, is noticeably insufficient compared to the number of students. In general students seem to have very limited availability of recreation zones for personal and group work. In general WiFi appears to be available in most of the zones.

The condition of most of the classes and equipment is quite good, however a life-cycle of up to 6 years might seem inappropriate for the programme. The software used by the study programme is at its latest versions, but students complain about lack of diversity of tools and options of software to accomplish practical tasks. Most of the laboratories are not convenient for group work: the furniture has no wheels and there is not enough space to re-arrange it. There is only one classroom containing a round table, the only evidence of group work conditions.

Surprisingly, only a minority of the recommended references for study modules are available to students. Most references are about ten years old and the natural comment from the students was that they would like to learn using newer material. In order to keep up to date, students would like to be involved in industrial events and local communities.

5. Study process and student assessment

The student admission requirements are clear and well understood by the students. The process of student admission to the Programme is carried out in accordance with the Rules of Student Admission to Kaunas University of Technology. This document is publicly available on the KTU website. The admission score is composed of Bachelor Diploma multiplied by 0,8 and evaluation of applicant's research multiplied by 0,2. However the composition of evaluation Commission is not mentioned.

The number of students admitted to this programme varies depending on how many state financed places there are at the time. As noted above, the number of students admitted to the programme in 2013 increased significantly when compared to 2012, which would seem to imply that there have been unfilled state financed places available. So the Panel believes that the Faculty should put more effort into explaining the programme's identity, to attract talented candidates who would want to study.

Knowing that most second cycle students already have jobs, 8 hours a day does not seem very rational, however during the visit students stated that it is not a problem to combine work with study as they can organise individual study plans or work at weekends. The possibility of distance learning is also available, although students are motivated to attend lectures.

The students believe that the work they undertake for their theses constitutes research and seem unaware of its relationship to the research activities of the staff. Indeed 10% of the thesis mark can only be obtained if the student publishes a paper based on their thesis work. In principle there are opportunities for students to be employed as project assistants but most have jobs anyway, generally at higher salaries. Thesis topics are normally suggested by staff, with some contributions from social partners, and students can propose their own topics. The assessment system of students' performance is clear and publicly available. During the visit, students indicated that they are aware of how their final theses will be assessed.

There are possibilities for ISE students to participate in mobility programmes. As of autumn 2013, the students of the Programme could apply for studies at 16 different universities, and the number is growing. The application requirements are publicly available. However, the number of available exchange places is always higher than the number of applicants. The reason for the low number of participants is that the majority of students have jobs. To increase student mobility, the Department of International Relations of KTU conducts additional candidate selections aimed at filling the vacant student exchange places. As stated in the SER, "There are

no students coming from abroad to study in the Programme, because it is delivered in Lithuanian". Based on the Bologna process, there should be availability for students from abroad to join the programme. The Panel suggests that funding be sought to develop an English language version of the Programme.

Full social support is available, with all information being publicly available. Students can get regular incentive scholarships for best grades and Rector's Awards (awarded for exceptional study and research results). Students can also receive one-time or regular social scholarships if they meet the requirements set in the social scholarship award and administration regulations approved by the Government of Lithuania. Dormitories are available for all students, and those who suffer from difficult financial circumstances and are receiving social scholarships can apply for full coverage of dormitory room fees in non-renovated dormitories. Psychological consultations are also available to students. During the visit, the students indicated that even though they have these various different kind of support, they rarely feel the need to take advantage of them.

ISE staff are available for consultation by students either face-to-face or via email. The interests of students are represented by the Student Association which conducts student surveys, student card distribution and is involved in Faculty Council decision making processes. Drop-out issues are discussed during meetings of the Faculty Council (which includes 3 students' representatives), and certain preventive measures can then be taken at Faculty level. The Faculty helps students find jobs after graduation by organising Career Days and putting them in contact with companies.

6. Programme management

The Programme is managed according to the methods, regulations and structures adopted by KTU in compliance with key policies of the European Union for quality assurance in higher education. The process of quality assessment and change is organised hierarchically at the level of the Programme, the Department of Information Systems, the Faculty of Informatics and higher instances of the KTU responsible for Quality control.

The core organisational unit is the Study Programme Committee (SPC), which sits at faculty level and comprises the coordinators of the different programmes, one student representative delegated by the student union of the faculty, and one business/industry representative. The remit of the SPC is quite broad, with faculty-wide responsibilities, from making proposals for the creation of new programmes or specialisations of existing programmes

(or their termination), to the update or creation of study courses, and down to planning/commissioning/approval of textbooks.

In relation to involving students in the quality-assurance process, electronic surveys are organised at university level, which students are invited to fill out for each subject at the end of the semester. According to the students the Panel met during the visit, the results of those surveys and of any actions taken as a consequence are not readily available to them. Student engagement with the surveys appears to be low, which hinders the collection of information that is representative enough to inform quality-related decision processes. To make the collection of information more effective, the Faculty organises round table meetings with student representatives and some teachers at Faculty level. However, the Department relies essentially on students to report when something goes wrong or corrective actions are not taken. The Panel would like to recommend that the Department put in place a more structured form of interaction with students, for example via a small committee consisting of key staff (e.g., the Programme Coordinator, the Head of Department, a librarian, a systems manager, but not teachers in general) and elected representatives of the student cohorts that would meet two or three times per semester to review any issues that students perceive to require action to be taken or any actions taken since previous meetings; ideally, the committee would be chaired by a student so as to encourage student involvement; minutes and a list of actions/outcomes should be published on Moodle so that it is available to all staff and students of the Department.

Social partners and graduates (alumni) are also involved in the quality management processes at Faculty level. In relation to employers, the Self-Evaluation Report mentions that professionals give feedback on the level of student preparation and the need for new competences, and that they analyse changes to the programmes. However, the meetings held during the visit of the Panel suggest that relationships with social partners and graduates are essentially ad-hoc and on a personal basis, often on the initiative of individual social partners. The Panel perceives that it would be in the best interest of the Department that meetings be organised where staff, social partners and graduates can engage in collective discussions around key topics; this would have the advantage of confronting different points of view and engage all stakeholders more effectively. Therefore, the Panel would like to recommend that the Department put in place a more structured form of interaction with social partners and graduates, for example via an Industrial Advisory Board that could meet at least once a year, with an agenda, minutes and list of actions/outcomes that would be made available to all.

An additional element of quality control that the Panel would like to recommend the Department to put in place is peer-observation of teaching, exam/coursework setting and marking. Such forms of peer-observation are very useful for spreading good practice, ensuring consistency of standards and criteria, and helping new members of staff develop or hone their teaching skills.

Mechanisms are in place at Faculty level to monitor student performance during each semester, which is based on intermediate grades that students obtain in coursework or laboratory work. However, the Panel regrets that those mechanisms are, at present, restricted to monitoring scholarships, and recommends that the Department makes use of that data for pastoral purposes, identifying students who may need assistance with their studies.

III. RECOMMENDATIONS

1. The Panel recommends that as and when the content of the courses are revised, the Department should continue to ensure that the courses include the most recent technologies being used in industry.
2. The Panel is concerned that many of the recommended texts for some courses are now considerably out of date and in many cases not easily available to students. The Panel therefore recommends that reading lists should be thoroughly reviewed and, where necessary, revised to include up-to-date material and also that the Department should liaise with the library to ensure that the recommended texts are available.
3. The Panel recommends that the Department should consider including operational aspects of IT, such as IT service management, in the curriculum.
4. The Panel recommends that the Faculty should press the University to install more seating and power supply outlets in open areas to provide students with proper conditions to use their own computers. There also needs to be greater availability of rooms in which students can meet to carry out group practical work.
5. The Panel recommends that it should be made clear to students that there are opportunities for them to choose different types of software to accomplish their practical work.
6. The Panel believes that the Department would benefit from an increased level of international contact with teachers in universities outside Lithuania, and that students would benefit from the presence of international students on the programme; this would mean developing an English language version of the programme.

7. The Panel recommends that the Department make students more aware of research in the Department, of entrepreneurialism and of industrial user group events.
8. The Panel was pleased to find that there are mechanisms in place to monitor the performance of scholarship students during each semester but notes that the system is largely reactive; the Panel would like to recommend a more proactive approach covering all students.
9. The Panel recommends that the Department considers introducing a system of peer observation of teaching both as a developmental process and a way of spreading good practice.
10. The Panel recommends that the Department should introduce more structured forms of interaction with students, student representatives and social partners, so that records can be kept for future reference, both of suggestions made and responses to them.

IV. SUMMARY

The Information Systems Engineering (ISE) 2-year master study programme is motivated by the need for information systems engineering specialists in Lithuania, so the aim of the programme is to educate students who are able to develop computer-based information systems. Several of the outcomes are at the forefront of the IS development area and the understanding of principles of project and change management are addressed.

The focus in the programme is on project-oriented work, enterprise modelling and databases. The courses are arranged in a sequence reflecting the different phases of a software project: requirements analysis, design, implementation and testing. Students start their final project in the first semester, so the organisation of the programme supports the project-oriented approach.

A considerable part of the study programme consists of courses related to semantic modelling, semantic representation and semantic processing. This is clearly at the forefront of the area of information systems engineering, but may be overly theoretical for professional information systems developers. The Panel believes that the content of the courses should be revised to reflect more recent technologies used in industry and that it would be helpful to include operational aspects of IT such as IT service management. There is also an issue regarding recommended textbooks and references: only a minority of the recommended reference texts are available to students and most are about ten years old.

The numbers and qualifications and experience of the staff involved in teaching the ISE programme satisfy the appropriate regulations and are more than adequate to ensure that the intended learning outcomes of the programme can be achieved by the students. The age distribution of the teaching staff is such that there is a good mix of younger and more experienced staff. Staff are recruited and appointed according to the appropriate regulations and there have been some changes in personnel during the evaluation period. It was however noticeable that virtually all those involved in this programme obtained all of their degrees at KUT. All vacant positions are offered publicly but not only is there a shortage of suitably qualified informatics staff generally in Lithuania but also most applicants tend to prefer to stay in the institution with which they are familiar.

There is a considerable emphasis on research in the Department, both individual and collaborative; during 2008-13, more than half of the staff participated in externally funded projects. All members of staff have good publication records, though only a few have publications in journals and conferences outside Lithuania. The Panel believes that it would be helpful for more staff to be involved in activities that bring them into contact with staff in other institutions, especially through two-way international exchanges. The Panel also recommends that the Department considers introducing a system of peer observation of teaching both as a developmental process and a way of spreading good practice.

The student admission requirements are clear and well understood by the students. As most of the students already have jobs, the 8 hours per day schedule seems very demanding but students do not appear have a problem with combining work with study as they can organise individual study plans or work at weekends. Students are motivated to attend lectures despite the opportunities for distance learning. The assessment system of students' performance is clear and publicly available and students are well aware of how their final theses will be assessed. However, the lack of awareness among students of how their thesis work relates to staff research activity is an issue that needs to be addressed. Similarly, students are unaware of industrial events taking place locally or of relevant local technical communities

Students are well supported both academically by the accessibility of the staff and in terms of social support, student welfare and careers advice. ISE staff are available for consultation by students either face-to-face or via email.

Both students and teachers have opportunities to participate in mobility programmes, though the participation rate among students remains low, despite positive efforts by the Faculty and the University. As an alternative, the Department could seek to attract students (and staff)

from abroad to participate, though this would require funding to develop an English language version of the Programme.

The Faculty of Informatics provides facilities for study programmes in three buildings located on the same campus, with a fourth about to be included. The Panel has some concerns about the inconvenience of this for disabled people and about the lack of signage for newcomers.

The condition of most of the classrooms and equipment is quite good, however a life-cycle of up to 6 years sounds inappropriate for the programme. The software used by the study programme is at its latest versions, but students complain about lack of diversity of tools and options of software to accomplish practical tasks.

Most of the students bring their own computers, but the provision of seating and power sockets in open areas is inadequate. Similarly, there is a lack of appropriate space for students to undertake the group work that is so important in a programme of this sort.

The Programme is appropriately managed at Departmental level and the process of quality assessment and change is integrated with the University's processes through a hierarchically system that includes the Programme, the Department of Information Systems, the Faculty of Informatics and University level committees. The core organisational unit is the Study Programme Committee (SPC), which sits at faculty level and comprises the coordinators of the different programmes, one student representative delegated by the student union of the faculty, and one business/industry representative.

Students are involved in the quality-assurance process through electronic surveys organised at university level, though the results of those surveys and of any actions taken as a consequence do not seem to be readily available to students. The Faculty also organises round table discussion between students and staff, though these are rather informal. The Panel believes that a more structured form of interaction with students would be helpful.

Social partners and Faculty alumni are also involved in the quality management and programme development at Faculty level, though this involvement is informal in nature, so again the Panel believes that a more structured form of interaction would be helpful.

The performance of scholarship students is monitored at Faculty during each semester, based on intermediate grades that students obtain in coursework or laboratory work. The Panel believes that the Department should make use of this data for pastoral purposes, identifying students who may need assistance with their studies.

V. GENERAL ASSESSMENT

The study programme *Information Systems Engineering* (state code – 621E15001) 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	3
2.	Curriculum design	3
3.	Staff	3
4.	Material resources	3
5.	Study process and assessment (student admission, study process student support, achievement assessment)	3
6.	Programme management (programme administration, internal quality assurance)	3
	Total:	18

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

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

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

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

Grupės vadovas:
Team leader:

Prof. dr. Roland N. Ibbett

Grupės nariai:
Team members:

Prof. dr. Jurgen Dorn

Prof. dr. Jose Luiz Fiadeiro

Simonas Razminas

Paulius Varonenka

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Kauno technologijų universiteto studijų programa *Informacinių sistemų inžinerija* (valstybinis kodas – 621E15001) vertinama **teigiamai**.

Eil. Nr.	Vertinimo sritis	Srities įvertinimas, balais*
1.	Programos tikslai ir numatomi studijų rezultatai	3
2.	Programos sandara	3
3.	Personalas	3
4.	Materialieji ištekliai	3
5.	Studijų eiga ir jos vertinimas	3
6.	Programos vadyba	3
	Iš viso:	18

* 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

Dviejų metų trukmės magistrantūros studijų programos *Informacinių sistemų inžinerija* (ISI) atsiradimą paskatino informacinių sistemų specialistų poreikis Lietuvoje, taigi programa siekiama parengti studentus, kurie sugebėtų kurti kompiuterines informacines sistemas. Keli (numatomi studijų) rezultatai yra susiję su informacinių sistemų (IS) plėtros sritimi ir projektavimo bei pokyčių valdymo principų supratimu.

Daugiausia dėmesio šioje programoje skiriama į projektus orientuotam darbui, organizacijų veiklai modeliuoti ir duomenų bazėms. Dalykai išdėstyti atsižvelgiant į įvairius programinės įrangos projektavimo etapus: reikalavimų analizės, projektavimo, įgyvendinimo ir išbandymo. Studentai savo baigiamąjį darbą pradeda pirmąjį semestrą, taigi šios programos organizavimas sustiprina į projektavimą orientuotą požiūrį.

Didelę šios programos dalį sudaro su semantiniu modeliavimu, semantiniu atstovavimu (*reprezentacija*) ir semantiniu apdorojimu susiję dalykai. Tai yra svarbiausi informacinių sistemų inžinerijos dalykai, tačiau informacinių sistemų kūrimo specialistams jie gali būti pernelyg teoriniai. Ekspertų grupė mano, jog reikėtų patikslinti dalykų turinį, kad jame labiau atsispindėtų

naujausios pramonėje naudojamos technologijos, ir kad būtų naudinga įtraukti operacinių aspektų IT panaudojimo klausimus, pavyzdžiui, IT paslaugų valdymą. Dar yra problema, susijusi su rekomenduojamais vadovėliais ir nuorodomis – studentams prieinama tik maža rekomenduojamų tekstų dalis, be to, daugelis šių tekstų yra maždaug dešimties metų senumo.

ISI programą įgyvendinančių dėstytojų skaičius, kvalifikacija ir patirtis atitinka susijusių reglamentų reikalavimus ir yra labiau nei pakankami numatomiems šios programos studijų rezultatams užtikrinti. Kalbant apie dėstytojų amžių, jaunesnių ir labiau patyrusių dėstytojų santykis yra geras. Darbuotojai priimami ir skiriami laikantis atitinkamų reglamentų; vertinimo laikotarpiu buvo kai kurių pokyčių personalo srityje. Taip yra ne tik dėl to, kad Lietuvoje apskritai trūksta kvalifikuotų informatikos specialistų – beveik visi kandidatai labiau nori likti toje institucijoje, kurią pažįsta.

Katedra daug dėmesio skiria moksliniams tyrimams, asmeniniams ir kolektyviniams; 2008–2013 m. daugiau kaip pusė dėstytojų dalyvavo iš išorės finansuojamuose projektuose. Visi dėstytojai yra paskelbę nemažai publikacijų, bet tik keli iš jų yra paskelbę mokslinius straipsnius užsienio žurnaluose arba skaitę pranešimus konferencijose užsienyje. Ekspertų grupė mano, kad būtų naudinga, jei dėstytojai labiau įsitrauktų į veiklą, kuri suteiktų jiems galimybę užmegzti ryšius su kitų aukštųjų mokyklų dėstytojais, ypač dalyvauti abipusiuose tarptautiniuose mainuose. Ekspertai dar rekomenduoja, kad katedra įdiegtų dėstytojų tarpusavio mokymo stebėjimo sistemą; tai būtų ir tobulinimo proceso dalis, ir būdas skleisti naudingą patirtį.

Studentų priėmimo reikalavimai yra aiškūs ir gerai suprantami studentams. Kadangi daugelis studentų jau dirba, 8 darbo valandos per dieną reikalauja daug pastangų, bet neatrodo, kad studentams būtų sunku suderinti darbą ir studijas, nes jie turi galimybę studijuoti pagal individualų planą arba dirbti savaitgaliais. Studentai yra apsisprendę lankyti paskaitas, nors suteikiama ir nuotolinių studijų galimybė. Studentų mokymosi rezultatų vertinimo sistema aiški ir vieša, studentai gerai susipažinę su jų baigiamųjų darbų vertinimo tvarka, tačiau nežino, kaip jų baigiamieji darbai susiję su dėstytojų mokslo tiriamąja veikla, ir šį klausimą reikia spręsti. Be to, studentai nieko nežino apie vietoje vykstančius pramonininkų renginius ar vietos techninių bendruomenių veiklą.

Studentams teikiama akademinė ir socialinė pagalba: dėstytojai yra prieinami, rūpinamasi studentų gerove, patariama karjeros klausimais. Šios programos dėstytojai konsultuoja studentus akis į akį arba elektroniniu paštu.

Ir studentai, ir dėstytojai turi galimybių dalyvauti judumo programose, nors, nepaisant fakulteto ir universiteto pastangų, studentų dalyvavimo lygis vis dar gana žemas. Katedra galėtų

pritraukti į šią programą studentų (ir dėstytojų) iš užsienio, nors tam reikėtų finansavimo, kad būtų galima parengti šios programos anglišką variantą.

Informatikos fakultetas turi studijoms skirtas patalpas, kurios yra trijuose to pačioje studentų miestelio teritorijoje esančiuose pastatuose ir dar numatomas ketvirtas pastatas. Ekspertų grupė šiek tiek susirūpinusi dėl jų nepatogumo neįgaliems studentams ir dėl to, kad nėra naujokams skirtų ženklų.

Daugelio auditorijų ir įrangos būklė visai nebloga, tačiau 6 metų eksploatacinis laikotarpis netinka programai. Įgyvendinant šią programą naudojama moderniausia programinė įranga, nors studentai skundžiasi, kad nėra praktinėms užduotims skirtų priemonių ir programinės įrangos įvairovės.

Daugelis studentų universitete naudojami savais kompiuteriais, tačiau atvirose erdvėse darbo vietų ir elektros lizdų nepakanka. Taip pat trūksta ploto, kur studentai galėtų dirbti grupėse, o tai labai svarbu įgyvendinant tokią programą.

Šiai programai tinkamai vadovauja (Informacijos sistemų) katedra; kokybės vertinimo ir pakeitimo procedūra įtraukta į universiteto procesus, taikant hierarchinę sistemą, apimančią programą, Informacijos sistemų katedrą, Informatikos fakultetą ir Universiteto komitetus. Pagrindinis organizacinis vienetas – Studijų programų komitetas (SPK), kuris posėdžiauja fakultete ir kurį sudaro įvairių programų koordinatoriai, vienas fakulteto studentų sąjungos deleguotas studentų atstovas ir vienas verslo / pramonės atstovas.

Studentai kokybės užtikrinimo procese dalyvauja universiteto lygiu organizuojant elektronines apklausas, nors nepanašu, kad studentams yra lengvai prieinama informacija apie tų apklausų rezultatus ir po to taikytas priemonės. Fakultete dar organizuojamos „apskritojo stalo“ diskusijos, kuriose dalyvauja studentai ir dėstytojai, bet jos gana neoficialios. Ekspertų grupė mano, kad būtų naudingiau, jei bendravimas su studentais būtų labiau struktūruotas.

Socialiniai partneriai ir buvę fakulteto studentai taip pat dalyvauja kokybės vadybos ir programos tobulinimo procesuose fakulteto lygmeniu, nors šio dalyvavimo pobūdis taip pat neoficialus, taigi ir vėl ekspertai mano, kad būtų naudingiau labiau struktūrizuoti bendravimą.

Fakultete kiekvieną semestrą kontroliuojamas stipendijas gaunančių studentų mokslo rezultatai, atsižvelgiant į tarpinius studentų įvertinimus už kursinį arba laboratorinį darbą. Ekspertai mano, kad katedra turėtų pasinaudoti šiais duomenimis mokomaisiais tikslais, nustatydamas studentus, kuriems gali prireikti pagalbos studijuojant.

III. REKOMENDACIJOS

1. Ekspertų grupė rekomenduoja, kad katedra ir toliau užtikrintų, kad, tikslinant dalykų turinį, į juos būtų įtraukiamos naujausios pramonėje naudojamos technologijos.
2. Ekspertai susirūpinę, kad daugelis kai kurių dalykų rekomenduojamų tekstų yra visiškai pasenę ir dažnai sunkiai prieinami studentams. Todėl ekspertų grupė rekomenduoja atidžiai peržiūrėti literatūros sąrašus ir prireikus juos patikslinti, įtraukiant naujausią medžiagą; o katedra turėtų palaikyti ryšį su biblioteka, kad užtikrintų rekomenduojamų tekstų prieinamumą.
3. Ekspertai rekomenduoja, kad katedra apsvarstytų įtraukti į programos sandarą operacinius IT aspektus, pavyzdžiui, IT paslaugų valdymą.
4. Ekspertų grupė rekomenduoja Fakultetui griežčiau pareikalauti, kad universitetas įrengtų daugiau sėdimų vietų ir elektros lizdų atvirose erdvėse, užtikrindamas studentams tinkamas sąlygas naudotis savais kompiuteriais. Be to, reikėtų skirti daugiau patalpų studentų grupiniam praktiniam darbui.
5. Ekspertai rekomenduoja paaiškinti studentams, kad jie turi galimybę naudotis įvairių rūšių programine įranga praktiniam darbui atlikti.
6. Ekspertų grupė mano, kad katedrai būtų naudinga plėsti tarptautinius ryšius su užsienio universitetų dėstytojais ir kad studentams būtų naudinga, jei šioje programoje dalyvautų studentai iš užsienio; tai reikštų, kad reikia parengti anglišką programos variantą.
7. Ekspertai rekomenduoja, kad katedra geriau supažindintų studentus su joje atliekamais moksliniais tyrimais, verslumu ir pramoninės vartotojų grupės renginiais.
8. Ekspertų grupė teigiamai vertina tai, kad yra įdiegti stipendijas gaunančių studentų mokymosi rezultatų stebėjimo kiekvieną semestrą mechanizmai, bet pažymi, kad ši sistema yra pernelyg automatiška, todėl rekomenduoja labiau atsižvelgti į kiekvieno studento poreikius.
9. Ekspertai rekomenduoja katedrai įdiegti dėstytojų mokymo tarpusavio stebėjimo sistemą, kaip tobulinimo proceso skatinimo priemonę ir būdą skleisti naudingą patirtį.
10. Ekspertų grupė rekomenduoja, kad katedra taikytų labiau struktūruotą bendravimo su studentais, studentų atstovais, socialiniais partneriais ir absolventais būdą, kad informacijos tikslais būtų galima ateičiai išsaugoti įrašus apie pateiktus pasiūlymus ir atsaką į juos.

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