STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

VILNIAUS UNIVERSITETO KAUNO HUMANITARINIO FAKULTETO

STUDIJŲ PROGRAMOS *VERSLO INFORMATIKA*

(valstybinis kodas – 621I20001)

VERTINIMO IŠVADOS

EVALUATION REPORT

OF *BUSINESS INFORMATICS* (*state code -621I20001*)

STUDY PROGRAMME

at VILNIUS UNIVERSITY KAUNAS FACULTY OF HUMANITIES

Experts' team:

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2. **Prof. dr. Peeter Normak,** *academic,*
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Išvados parengtos anglų kalba

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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	***Verslo Informatika***
Valstybinis kodas	621I20001
Studijų sritis	Fiziniai mokslai
Studijų kryptis	Informacijos sistemos
Studijų programos rūšis	Universitetinės studijos
Studijų pakopa	Antroji
Studijų forma (trukmė metais)	2 metai
Studijų programos apimtis kreditais	120
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	Informacijos sistemų magistras
Studijų programos įregistravimo data	2003-05-29, Nr. 763

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	***Business Informatics***
State code	621I20001
Study area	Physical Sciences
Study field	Information Systems
Type of the study programme	University Studies
Study cycle	Second
Study mode (length in years)	2 years
Volume of the study programme in credits	120
Degree and (or) professional qualifications awarded	Master of Information Systems
Date of registration of the study programme	29-05-2003, No. 763

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I. INTRODUCTION

1.1. Background of the evaluation process

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

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

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

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

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

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

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

1.2. General

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

No.	Name of the document
1.	Research activities of Business Informatics students at VU KHF

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

Vilnius University was formed in 1579 and is both the oldest and the largest university in Lithuania with some 21,006 students as of November 2015. It comprises 12 faculties and 7

institutes 4 centres and 7 non-academic subdivisions. The mission of Vilnius University is to create, accumulate and disseminate knowledge by ensuring continuity of authentic university culture distinguished by the atmosphere where old traditions and new ideas enrich each other. Freedom of thought and diversity of opinions are the main values of the University community. A unity of research and studies is the core principle of the overall activity of the University.

Kaunas Faculty of the Humanities which was established in 1964 is the only subdivision of Vilnius University located in a city other than Vilnius. This study programme is offered by the Department of Informatics. It began in 2001, and had evolved from the earlier programme called Business Information. It was accredited in 2009 and given accreditation for a 6 year period.

1.4. The Review Team

The review team was completed according *Description of experts' recruitment*, approved by order No. 1-01-151 of Acting Director of the Centre for Quality Assessment in Higher Education. The Review Visit to HEI was conducted by the team on *21/03/2016.*

1. **Prof. dr. Andrew McGettrick (team leader),** *Strathclyde University, Professor of Computer Science and Information, United Kingdom.*
2. **Prof. dr. Peeter Normak,** *Tallinn University, Professor, Director of the School of Digital Technologies, Estonia.*
3. **Prof. dr. Jukka Paakki,** *University of Helsinki, Professor in Computer Science, Finland.*
4. **Mr Tomas Urbonas,** *CEO of Information Technology Company JSC "SONARO", Lithuania.*
5. **Mr Žygimantas Benetis,** *student of Kaunas University of Technology study programme System Software*.

The assessment was based on scrutiny of the institution's self-evaluation report (and associated annexes) and the review panel visited the institution on Monday 21st March 2016. They held meetings with faculty administration staff, the staff responsible for the self-evaluation report, students, teachers, alumni and social partners; in addition the review panel had sight of a sample of student work.

II. PROGRAMME ANALYSIS

2.1. Programme aims and learning outcomes

The aims of the study programme are described as: to prepare specialists of high quality: who have knowledge of the theories and methods of informatics and the application of informatics to business; are able to renew and apply knowledge of informatics and application to business; are able to make suitable decisions based on their knowledge of economics and information technology; have strong abilities in scientific research.

In more detail: the generic competences include the ability to think critically and to carry out scientific research as well as communicating with technology and business stakeholders; subject specific competences include the use and effective application of advanced methods in information technology as well as economics and management coupled with the ability to initiate IT projects and lead them, taking due account of the inherent financial risks.

Overall the aims of the programme were generally clear and well defined though in the subject specific competences there is reference to the creation of complex undefined information models. In the view of the review panel, complexity and undefined entities are generally undesirable. The mention of scientific research in such a study programme also merits scrutiny.

In terms of the business dimension, there is an emphasis on economics and on management. The review panel was of the view that, for an advanced Masters study programme, an outsider might expect the involvement of staff from a Business School, but only staff from the Department of Informatics are involved in the delivery of this study programme. Concepts such as the important and topical concept of organisational transformation caused by developments in Informatics do not feature.

Information about the study programme is available in English at
http://www.vu.lt/site_files/Business_Informatics_2016_NEW_PROGRAMME.pdf

Graduates of the study programme are expected to work in a range of possible company settings as IT systems analysts, designers and creators of IT systems, IT system administrators, IT project managers, or leaders of IT system integration; this confirms the view of members of the review panel that graduates from a bachelor programme are not normally sufficiently prepared to act as

IT project managers. But the utility of the Masters dimension did not seem to have a strong focus.

The control of the study programme resides within a Study Programme Committee which meets at least twice per year, and before each semester. An employee of CSC Baltic is described as a permanent member of this committee with other social partners being consulted at times. In the view of the review committee this arrangement seems somewhat curious. A more formal approach to gathering information about the labour market, and about the views of a range of social partners and their needs seems desirable and could be used to better inform the Study Programme Committee.

In formulating the aims and objectives account has been taken of international developments as they exist within EQANIE (the European Quality Assurance Network in Informatics Education) and the ACM Curricular recommendations in Computer Science. In the view of the review panel the ACM Curricular recommendations on Masters programmes in Information Systems would have been more relevance. There has also been some benchmarking against programmes in other institutions but this stopped short of addressing assessment arrangements.

Overall, the study programme aims and the learning outcomes were just seen by the review panel to be consistent with the type and level of qualification and the degree offered.

The name of the study programme, its learning outcomes and the qualification were all seen by the review panel to be mutually compatible. Having said this an outsider might expect appropriate Business School involvement and perhaps a deeper understanding of the important developments in Informatics that are impacting the world of business.

2.2. Curriculum design

The curriculum of the Programme has been designed to comply with the national order on *Approval of the General Requirements for Master Degree Study Programmes* (Minister for Education and Science of the Republic of Lithuania, Order No V-826, 2010) and with the *Vilnius University Study Programme Resolution* (Senate Committee of Vilnius University, Resolution No SK-2012-12-4, 2012). In addition, the internationally acknowledged education model of Computer Science, the joint *ACM / IEEE-CS Computing Curriculum* has been used as a substance framework for the Programme.

The Review Team acknowledges the use of ACM / IEEE-CS curricula recommendations as one of the benchmarks for the Programme, but recommends taking into account the joint ACM / AIS curriculum guidelines for Information Systems as well.

The curriculum meets the legal requirements on second level Master degree study programmes as follows:

- the scope of the Programme is 120 credit points in ECTS (European Credit Transfer and Accumulation System) (minimum: 90 ECTS, maximum: 120 ECTS)
- the volume of core high-level subjects in the study field is 75 ECTS; basically the whole curriculum except for Master's Research Work I-III and Final Master Thesis (minimum: 60 ECTS)
- there are no elective or general subjects or free-electives (maximum: 30 ECTS)
- the volume of the final project; that is, Master thesis, including Master's Research Work I-III, is 45 ECTS (minimum: 30 ECTS)
- the number of subjects taught per semester is 4 or 5 (maximum: 5)
- the share of self-studies (independent work) is 76,5 % in total and varies between 55,1 % and 97,5 % per study subject (minimum: 30 %)

According to the plan (schedule) of the Study Programme and the subject descriptions, the study subjects are spread evenly and their themes are not repetitive.

The Study Programme combines two rather different fields of study, business and computer science (informatics). On one hand the combination is a merit since it makes the Programme rather unique and important for the Lithuanian business sector. On the other hand, such a dual nature also introduces challenges since the curriculum must now be wide enough and balanced in both of its base disciplines.

The Review Team finds that the ambitious goals of the Programme have not been fully met. The curriculum is not completely balanced by being focused more on the Informatics side and less on the Business side. This imbalance should be improved by including in the curriculum some additional core subjects in business management, such as organizational and human resources aspects. However, the content of the subjects and modules is consistent with the type and level of the studies, and the scope of the Programme is sufficient to ensure reaching the learning

outcomes. Also, the content of the Programme reflects the latest achievements in science and technologies.

The imbalance of the Programme can also be seen in the Master's theses. Almost all of them have been made in Informatics, and just a few contain contributions in Business. The Master's theses shall be more in line with the dual nature of the Programme, for instance by including some form of (mandatory) business analysis of the described ICT solution or product.

On the other hand, the students can select their own topic for the Master's thesis, which is acknowledged by the Review Team. However, the topics must be advanced and on a higher (second) level than a previous (first level) Bachelor's thesis that some of the students are using as a starting point or draft for their Master's thesis. One problem seems to be the lack of reasonable alternatives, so it is recommended to provide the students with a larger selection of topics for Master's thesis, with enough substance both in Informatics and in Business.

The Informatics side of the curriculum has a flavour of intelligent systems. This is perfectly fine, especially since the subjects are oriented towards modern business applications with large amounts of data. The subject on "Multimedia Technologies" does not contribute to the aims of the Programme, so it could be removed. On the other hand, there should be more security issues included in the curriculum.

In the previous assessment of the Programme (2010), it was recommended to introduce groupware learning techniques and problem-oriented use cases in lectures and practical work of the Programme. The Review Team finds that the curriculum has been improved in these respects, but recommends strengthening the students' practical skills in the leadership of ICT projects since quite a number of them seem to be employed as project managers in ICT companies.

Another recommendation in the previous assessment was to find possibilities to include some more elective as well as free-choice subjects in the Programme. The same problem does still exist since the current curriculum includes just a single optional module of 5 credits with only two choices, and no free-electives at all. The Review Team (still) finds this unacceptable and strongly recommends increasing the number of optional subjects and introducing some completely free-elective subjects in the curriculum. The students that the Team interviewed made a wish of having the optional subjects in Informatics rather than Business.

The course management system Moodle is widely used in the Programme. The Review Team recommends finding possibilities to provide some of the subjects in a proper e-learning mode, for instance by implementing them as massive open online courses (MOOC). Having subjects available as MOOCs would, in particular, make the studies more flexible for students who have a (full-time) job. In general, the teaching methods for the subjects are appropriate for the achievement of the intended learning outcomes.

2.3. Teaching staff

The study programme *Business Informatics* is delivered by 6 Professors, 2 Associate Professors and 2 lecturers, i.e. 10 in total. 9 teachers belong to the academic staff; all have PhD degree. The majority (7) are working in *Department of Informatics* of the *Faculty of Humanities,* 2 have company employment. However, all staff members have got their BA and MA degrees in Lithuanian universities, and only two have earned their PhD equivalent degrees outside Lithuania – in former Soviet Union. As both are at retirement age, all teaching staff will soon have got all their degrees in Lithuania.

The qualifications of teaching staff are in general adequate. However, there is certain inconsistency between the qualification of the teaching staff and what the SER claims the focuses the programme should be: "Business Informatics prepares informatics who possess deep knowledge in economics and management". However, the knowledge of graduates in management can hardly be qualified as "deep" because: 1) no lecturer has research experience in management and 2) although one of the learning outcomes is "Able to apply innovative and transformative management skills to leading the IT organization", no description of course units states development of management skills as one of its learning outcome.

Average yearly admission to the programme is about 13 students. Taking into account the fact that the teaching staff devotes about 25% of their teaching time for teaching courses of the programme (Table 9 of SER: the total amount of teaching hours of is about 3000, on which 750 for the programme), the statistical student/teacher ratio will be about 10 (=(2x13/10)/4). This ratio is completely acceptable. The share of study subjects (including thesis, in ECTS) taught by Professors forms about 70% of studies. A teacher with no scientific degree is involved in teaching of only one study subject. Note that the teaching load among the staff members is quite uneven, reaching, for example, in the case of professors from 160 to 540.

The academic staff have been quite stable during the last few years and is able to assure adequate provision of the programme. However, the average age of teaching staff is relatively

high – 50 years. This is caused mainly by relatively high percentage (30%) of teachers over 60. Therefore, the institute faces the problem of finding new staff members in coming few years.

The favourable student/teacher ratio creates good conditions for the teaching staff to devote enough time to R&D and for preparation of course materials. However, the university has not yet implemented a regular system of sabbaticals for teaching staff (the need of which was mentioned already in the 2010 Assessment Report). The teachers also complained that the university almost does not provide resources for research purposes, including for participation on international conferences.

Most of the research of the teaching staff is related to the study programme – about 80% of subjects taught comply with the scholarly activities of teachers.

There have been formed two research focuses in the department dealing with: 1) Knowledge bases and information systems and 2) Financial information analysis. It is remarkable that although some teachers have relatively actively published in international journals and proceedings, the number of co-authors from other countries is almost nonexistent. However, the majority of the staff members have published only in national titles, in non-public titles without official references or in titles internal to the university. This is apparently caused by the general policy which values more the quantity rather than quality of publications. This should be reverted as it can lead to production of "scientific noise" and undermines the reputation of science. The abovementioned factors (small number of degrees obtained in foreign universities, non-existing sabbaticals, scarce participation on international conferences and involvement in international research teams) allow conclude that the potential of teaching staff to contribute in international academic activities is not fully exploited.

2.4. Facilities and learning resources

According to the SER, the premises for studies are adequate both in their size and quality, it matches requirements for that number of students. SER provides detailed information about the premises. Additional evidence was also found during the institutional visit to VU KHF. EET noted that the infrastructure meets minimal requirements; but there was limited library study space and limited facilities to support effective group working. However, some improvements had been made. In 2014 one of the computer classes had been renovated. In 2015, a new Audio visual lab was opened. Wi-fi is covering only 70% of the premises. But generally there was no evidence of exciting new facilities, but rather evidence of a teaching and learning environment that

lacked excitement or information (e.g. in the form of posters) about upcoming events, exciting opportunities (e.g. conferences, prizes), challenges.

88% of the lecturers have their own working places. Most of the students are using personal laptops during the lectures, but there are only a few electrical sockets in an auditorium. There are co-working places for students available from 8.00 - 8.00 as well as relax zones sponsored by the private companies.

VU KHF is not fully accessible for students with disabilities. Full access to the premises is not provided for students with reduced mobility.

The key items to cover teaching and learning equipment used for this study programme is as follows:

- Four auditoriums, one laboratory and four computer classes are being mostly used to support the study process and research work.
- Study modules are under process of movement to the platform of online teaching (Moodle).

Tablets / phones, Raspberry PI, Robots and other smart gadgets are not widely used in study process. Even though most of the auditoriums are equipped with multimedia, distance learning and lectures recording possibilities are not provided at its' full content.

Regarding teaching materials,

- Access to over 20 licensed online databases is covering the study subjects of BIM and is available to the staff and students at VU KHF
- New library was established few years ago and is open from 9.00 to 19.00 Monday - Thursday, from 9.00 to 18.00 on Fridays and from 10.00 to 15.00 on Saturdays.
- Department of Informatics possesses an e-library located at the FTP server.
- Generally there are insufficient textbooks in English and insufficient access to the top international journals and literature

- Under the agreement with Kaunas University of Technology (KTU), the students of VU KFH have access to the KTU library resources. Moreover, the students use the resources of Kaunas County Public Library.

2.5. Study process and students' performance assessment

Graduates from a wide variety of first cycle study programmes can be admitted to this study programme. Graduates with major or minor studies in Informatics, Information Systems, Informatics Engineering, Mathematics, certain fields from Electronic and Electrical Engineering as well as Economics, Business and Management and graduates in fields such as Computer Linguistics can gain admission to the programme. Students from certain study programmes in the physical sciences from Colleges can also gain admission but they have to undertake bridging courses. The precise entry requirements are based on a formula that varies depending on the first degree achievement with, according to the web site for the study programme, a requirement that the student has studied economics, informatics and mathematics. Generally the formula takes account of relevant grades recorded in the transcript of the student's academic record and the mark in the final thesis from the first cycle study programme, as well as marks in any bridging courses. However, the majority of students entering the study programme (around 80%) had graduated from the first cycle study programme in Business Informatics from the home institution.

In the view of the review panel these admissions criteria cover a very wide spectrum of achievement and represent a challenge for taking the students forward together to genuine Masters level achievement. The precise admissions requirements can be considered to be well-founded, but they are challenging.

The numbers of students entering the programme in the years 2011, 2012, 2013, 2014, 2015 have been 17, 11, 11, 16, 11. In the corresponding years the number of applicants (and first priority applications) have been 32(19), 20(11), 31(17), 40(19) and 17(12). All the students admitted to the study programme between 2011 and 2015 have been state-funded. The decrease in numbers in 2015 are attributed to the fall in the number of graduates from the first cycle programme in Business Informatics. Given the needs of the Lithuanian labour market, there is recognition of a need to revisit the admissions processes.

In terms of progression through the two years of the programme, of the students entering in 2010, 2011, 2012, 2013, 2014 the numbers dropping out were in the first (and second) year: 3(1), 4 (2), 2(0), 3(4), 5(0) leading to relatively small numbers in some of the final years of the programme. The reasons for drop out have been analysed. The main reasons may be described as social, e.g. family reasons, requests from students themselves, emigration. But unsatisfactory performance also accounts for one third of all drop outs. At meetings held during their visit, it became clear that students from other backgrounds such as social sciences did not always succeed.

The study programme is organized on the basis of 30 credits per semester (800 hrs of student work) over each of the 4 semesters. Some 752 hours are devoted to class work (which includes lectures, seminars and exercises) and the remaining 2448 hours are for individual work, of which 389 hours are for the preparation of the final thesis in the final semester. The review panel estimated that, on the basis of discussions at meetings, students were spending approximately 21 hrs per week on their studies; the self-evaluation report suggested that 40 hrs per week was expected.

From the meetings held during their visit, the review panel concluded that all students were fully employed and were not being challenged by the study programme. There was insufficient novelty and challenge in the practical activity and exercises. The review panel felt that practical exercises should exhibit far greater novelty and they should challenge students; the notion of using essentially the same exercises year-on-year should be outlawed.

Since 1996 the Department has organised conferences on Information Technologies for Business Management for Masters students and PhD students. Masters students are encouraged to publish papers at this and other conferences; successful publication brings extra credit that is attached to the final thesis. In the institution's self evaluation report it is claimed that around 80% of students benefit from this.

Responsibility for study abroad lies with the Department of International Programmes and Relations. The Faculty has 81 agreements under the Erasmus programme with foreign universities as well as 5 bilateral co-operation agreements. One student in session 2013/14 studied in Libera Universita di Bolzano in Italy. However, some students have already had spent

time in foreign universities during their Bachelor programme; moreover, since students on this study programme are employed, taking time to study abroad is not feasible.

Financial assistance in the form of scholarships is available to student including promotional scholarships, grants for living expenses and support for disability; there are also scholarships given by the social partner UAB CSC Baltic for the best students. Dormitory accommodation is available to students from outside Kaunas.

The final mark for a course are typically based on marks from written exam papers including the final papers, participation in seminars and both individual and group project work. Lecturers will typically inform students during the first lecture of a course about intended learning outcomes as well as the precise assessment strategy. The intention is to carry out evaluation of student performance consistently throughout the semester to ensure the work consistently. There is an Academic Ethics Code of Vilnius University that addresses plagiarism and such issues.

The review panel concluded from the discussion at meetings that it was possible for students to gain passes in classes without performing reasonably in the final exam. Moreover, the quality control over the assessment processes did not feature, e.g. to ensure that all learning outcomes were being addressed, there was no reuse of examination questions, that multiple choice was not being used to excess. Reviewers felt that multiple choice had little place in the examining of Masters students. Moreover, there was insufficient exposure of students to the top internationally recognised publications and literature.

The work for the final project takes place over the two year of the programme: in the first semester a preliminary choice is made of topic and there is a related review of the literature; in the second semester, related theoretical material is addressed and there is an investigation into choice of methods leading towards a solution; in the third semester there is preparation of the research methodology and attention to the environment in which to collect preliminary relevant data; in the final semester the final steps are taken, At the end of that semester students make a presentation and provide a defence of their work.

A Defence Board evaluates the final work taking into account such matters as originality, methodology, validation of conclusions and quality of the final presentation but using also a mark from reviewer and a mark from the student's advisor. If opinion is divided the chair of the Defence Board can make a final decision. Of the grades awarded during the five years from

2011/12 session through to the 2014/15 session, there have been 16 at grade 10, 11 at grade 9, 10 at grade 8, 4 at grade 7 and 1 at grade 6; some 4 students have had a fail mark.

However, the review panel found that students were occasionally choosing the topic of their final thesis on the basis of its link with the topic of their undergraduate thesis due to the lack of reasonable alternatives. Moreover, the evidence of business in the work of final theses was sparse; indeed the review panel felt that certain topics were not really in tune with a Masters degree in Business Informatics, e.g. 'Recognotion of Voice Commands by Using Neural Networks', 'The Research on Methods for Solar Power Monitoring Automation', 'The Research on the Efficiency of Voice Recognition System Engines'.

Neither the Programme Study Committee nor the Faculty had been able to find out about the professional activities of graduates. However there is evidence that most graduates do work in the field of Business Informatics; a small number (at least one and at most 3) pursue doctoral studies each year.

2.6. Programme management

Internal quality assurance is addressed in two documents, the Policy of Vilnius University Study Quality and Strategy for Quality Improvement (2013-2015) and Vilnius University Quality Manual prepared by the University's Quality Management Centre. The Faculty Board and administration are responsible for the organization of the study programme, the material resources, the employment and currency of pedagogic staff as well as international aspects. The Head of the Department of Informatics and the associated administration have responsibility for the study programme including communication with lecturing staff, concern for students, organizing the final thesis, and obtaining feedback from students and alumni. The Study Programme Committee, whose activities are governed by regulations approved by the Senate and associated statutes, has responsibility for the study programme management.

The composition of the Study Programme Committee was approved by Senate on 10th October 2013. This includes the Head of Department, an additional three professors, one lecturer, a student representative and a social partner. The social partners who met with the review panel did not know who their representative was on the Study Programme Committee.

Meetings of the Study Programme Committee are held at least once per semester. Course units are revised by the committee annually, decisions taking into account feedback from lecturing staff. Periodically the Vilnius University Student Representative Student surveys provide feedback to lecturers on their courses. Quite reasonably, minor changes can be made on a more informal basis at the start of each semester.

The University organises centralized surveys on all first and second cycle study programmes twice per year, at the end of each semester. In session 2013-14 some 32.8% of students in this study programme participated. (6.5) Considering the small number of students and the close links with the staff, greater attention is paid to less formal feedback. In the view of the review committee this seems very reasonable though care has to be taken to carefully document input to the Study Programme Committee as well as change and the reasons for it.

The evaluation and the improvement processes involve the main stakeholders - staff, students and social partners. However, alumni had not been asked for their views on the Study Programme following graduation. Although students provided feedback they never received feedback on the effectiveness or impact of their input.

The internal quality assurance measures are reasonably effective and efficient but greater emphasis could be placed on wider input, e.g. on how the field is changing in the eyes of the wider academic community.

Strengths of the Programme

- Business and informatics forms a bonding which provides a unique combination of informatics and business and is seen as important for Lithuania
- The classes are small and so there is the potential for students to receive individual attention
- All students complete the class surveys and so make their views known
- Students were able to select the topic of their final thesis
- There is a ‘best lecturer’ award and this as well as financial rewards are seen as incentives to encourage good teaching
- The staff do engage in the production of scientific publications; to do this they form small project teams
- Social partners as well as graduates seemed satisfied with the study programme

Areas for improvement in the Programme

- An outsider (or a potential applicant) might expect the involvement of staff from a Business School in this study programme, but only staff from the Department of Informatics are involved in its delivery
- The curriculum was unbalanced with too little business, as is evident from the final theses; moreover there is too little in the way of optional subjects, with no free electives at all
- The review panel estimated that students were spending approximately 21 hrs per week on their studies as opposed to the 40 hrs per week that was expected
- All students were fully employed and were not being challenged by the study programme
- There was insufficient novelty and challenge in the practical activity and exercises
- Students were often choosing the topic of their thesis on the basis of its link with the topic of their undergraduate thesis due to the lack of reasonable alternatives
- It was possible for students to gain passes in classes without fully participating in the final exam
- The quality control over the assessment processes did not feature, e.g. to ensure that all learning outcomes were being addressed, there was no reuse of examination questions, that multiple choice was not being used to excess
- The evidence of business in the work of final theses was sparse; indeed the review panel felt that certain topics were not really in tune with a Masters degree in Business Informatics
- There was insufficient exposure of students to the top internationally recognised publications and literature
- Some 80% of students admitted to the study programme came from the institution's own bachelor programme in Informatics
- Some 4 students out of 10 had failed their final thesis in 2015 and the number of applications to the study programme had fallen dramatically recently
- The review panel found it strange that a representative of one company was described as a 'permanent member' of the Study Programme Committee
- The social partners who met with the review panel did not know who their representative was on the Study Programme Committee

III. RECOMMENDATIONS

1. Encourage current and prospective university teachers to acquire degrees in leading foreign universities.
2. Introduce sabbatical leave for full-time teachers.
3. Put more emphasise on publishing in high-level international journals and proceedings.
4. Suggest a review of the curriculum that seeks appropriate input from a Business School perspective and pays some attention to ongoing organisational transformation based on developments in Informatics. The ACM recommendations for Masters programmes in Information Systems should be examined, although these are currently under review and are seeking to strengthen attention to entrepreneurship, organisational change, information assurance (security) based on advances in Informatics.
5. The review of the curriculum should ensure that students spend approximately the requisite 40 hrs per week on their studies and ensure that the independent study time is being properly managed and utilised. There should also be more optional and free-elective subjects in the curriculum.
6. Access for the disabled students should be provided to ensure better inclusion in the study process. Electrical sockets should be installed in the auditoriums to provide electricity to personal students' laptops. Wi-fi coverage should be increased within the premises.
7. Even though VU KHF has access to various databases, students and lecturers have outlined that a wider range of different databases should be considered and access to those databases should be provided to them. The ACM and IEEE digital libraries would provide access to the top international publications.
8. Overall equipment (computers, furniture etc.) and premises should be renewed.
9. Steps should be taken to quality control assessment processes. These steps should minimise the possibility of students playing down the importance of the final exam by performing extremely well in tests and practical work. Moreover the use of multiple choice questions at Masters level should be discouraged.
10. The quality control processes for assessment should give confidence that the learning outcomes are being met, that the level of challenge is appropriate and generally that the assessment methods will stand scrutiny from an outside agency. The topic of the final

thesis should reflect the study programme; it should build on the work of the taught classes and reflect the coming together of business and informatics.

11. In marketing this study programme, strengthen the case for the impact that a graduate can have in employment, e.g. by articulating the role of innovation, the impact on organisational change.
12. Give attention to the admissions processes so that there continues to be a healthy number of applicants and well-qualified students entering the programme; steps should be taken to a far richer diversity of students coming to study on the programme.
13. Steps should be taken to ensure that the representative of social partners on the Study Programme Committee is known to all social partners and that person's role and the role of all social partners should be explained. Alumni ought to be asked for their (anonymous) views on the study programme following their graduation and this should feed through to the Study Programme Committee.
14. Where students provide feedback on their study programme, they should be informed about the effectiveness of that and any consequent change. Feedback from students and social partners should be carefully documented for consideration by the Study Programme Committee.

IV. SUMMARY

This second cycle study programme in Business Informatics is offered by the Kaunas Faculty of Humanities, established in 1964 and the only subdivision of Vilnius University located outside of Vilnius itself. The study programme began in 2001, and had evolved from the earlier programme called Business Information. It was accredited in 2009 and given accreditation for a 6 year period;

Graduates are expected to be equipped to work in the public sector organisations or the business sector as business IT analysts, designers or creators of IT systems, IT system administrators, IT project managers or initiators and leaders of IT projects. There is also the possibility of pursuing research in particular areas.

The profile of admissions and progression on the study programme had been entirely satisfactory until recently when the number of applicants had fallen away and the progress of students had been problematic. In part this was attributed to the fact that around 80% of entrants came from the institution's own undergraduate programme in Informatics and there was a decline of interest in that programme. These events could be construed as on-off but there seemed to be warning signs that the admissions criteria had to be reviewed and the programme strengthened.

In each of the 4 semesters, the basic study programme involves 800 hrs of student time; successful completion attracts 30 credits. Students are expected to spend some 40 hrs per week on their studies, this including formal classes but also independent study. The review panel found that students were generally employed and they were spending around 21 hrs per week on their studies.

Students did not feel challenged by the work of the course. They felt there was scope for greater novelty and greater challenge. They were tending to choose the topic of their final thesis on the basis of links with the work of their undergraduate thesis. The feedback mechanisms fed through to the Study Programme Committee which had a student representative and a representative of the social partners. However the representative was unknown to the social partners who attended the meeting with the review panel.

In conclusion the review panel was of the view that the study programme design and content ought to be reviewed so that it would reflect to a far greater extent current thinking about the coming together of business and informatics and the important relationships between them. In the process of doing that, steps should be taken to address the issue of the time being spent by students on their studies and the issue of challenge and novelty.

V. GENERAL ASSESSMENT

The study programme Business Informatics (state code – 621I20001) at Vilnius University Kaunas Faculty of Humanities is given **positive** evaluation.

Study programme assessment in points by evaluation areas.

No.	Evaluation Area	Evaluation of an area in points*
1.	Programme aims and learning outcomes	3
2.	Curriculum design	3
3.	Teaching staff	3
4.	Facilities and learning resources	2
5.	Study process and students' performance assessment	2
6.	Programme management	3
	Total:	**16**

*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. Andrew McGettrick
Grupės nariai: Team members:	Prof. Dr. Peeter Normak
	Prof. Dr. Jukka Paakki
	Mr. Tomas Urbonas
	Mr. Žygimantas Benetis

VILNIAUS UNIVERSITETO KAUNO HUMANITARINIO FAKULTETO ANTROSIOS PAKOPOS STUDIJŲ PROGRAMOS *VERSLO INFORMATIKA* (VALSTYBINIS KODAS – 621I20001) 2016-05-24 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-113-2 IŠRAŠAS

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VI. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus universiteto Kauno humanitarinio fakulteto studijų programa *Verslo informatika* (valstybinis kodas – 621I20001) 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	2
5.	Studijų eiga ir jos vertinimas	2
6.	Programos vadyba	3
	Iš viso:	**16**

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

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IV. SANTRAUKA

Šią antrosios pakopos Verslo informatikos studijų programą vykdo 1964 m. įsteigtas Kauno humanitarinis fakultetas, kuris yra vienintelis Vilniaus universiteto padalinys ne Vilniaus mieste. Ši studijų programa pradėta vykdyti 2001 m., ji evoliucionavo iš ankstesnės Verslo informacijos programos. 2009 m. ji buvo akredituota šešerių metų laikotarpiui.

Tikimasi, kad baigę studijas absolventai bus pasirengę dirbti viešojo sektoriaus organizacijose ar verslo sektoriuje verslo IT analitikais, IT sistemų projektuotojais ar kūrėjais, IT sistemų administratoriais, IT projektų vadovais ar iniciatoriais bei IT projektų lyderiais. Taip pat sudaroma galimybė tam tikrose srityse siekti mokslininko karjeros.

Priėmimo į studijų programą ir pažangos mokantis joje profilis buvo visiškai pakankamas, iki šiol, kai sumažėjo kandidatų į šią studijų programą skaičius, o dėl studentų pažangos iškilo problemų. Iš dalies tai buvo siejama su tuo, kad apie 80 % įstojusiųjų buvo tos pačios institucijos Informatikos bakalauro programos absolventai, o susidomėjimas šia programa

mažėjo. Tokius faktus būtų galima vertinti kaip vienkartinius atvejus, bet buvo įspėjamųjų ženklų, rodančių, jog reikėtų peržiūrėti priėmimo kriterijus, o programą sustiprinti.

Pagrindinės studijų programos kiekvienam iš 4 semestrų reikia skirti 800 valandų studentų laiko, norint sėkmingai baigti programą reikia surinkti 30 kreditų. Studentai turėtų 40 valandų per savaitę skirti studijoms, įskaitant oficialias paskaitas ir savarankiško mokymosi laiką. Vertinimo grupė sužinojo, kad dažniausiai studentai jau dirba ir studijoms skiria tik 21 valandą per savaitę.

Studentams studijos nekėlė didelių iššūkių. Jų manymu, būtų galima įvesti daugiau naujovių ir kelti didesnius tikslus. Studentai siekė pasirinkti savo baigiamojo darbo temą pagal sąsajas su savo pirmosios studijų pakopos baigiamuoju darbu. Grįžtamojo ryšio mechanizmai buvo naudingi Studijų programos komitetui, kuriame dalyvavo studentų atstovas ir socialinių partnerių atstovas. Vis dėlto socialiniai partneriai tokio savo atstovo, kuris dalyvavo susitikime su vertinimo grupe, nepažinojo.

Vertinimo grupės manymu, studijų programos struktūrą ir turinį reikėtų peržiūrėti, kad jie kur kas labiau atspindėtų dabartinį požiūrį į verslo bei informatikos susijungimą ir svarbų jų santykį. Darant tai reikia išspręsti studentų studijoms skiriamo laiko problemą ir iššūkių bei naujovių klausimą.

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III. REKOMENDACIJOS

1. Skatinti esamus ir būsimus universiteto dėstytojus įgyti mokslinį laipsnį pirmaujančiuose užsienio universitetuose.
2. Įvesti visu etatu dirbančių dėstytojų mokslines atostogas.
3. Labiau skatinti publikacijas aukšto lygio tarptautiniuose žurnaluose ir moksliniuose leidiniuose.
4. Siūloma peržiūrėti programos turinį, kad jame būtų atitinkamas TVM indėlis ir atkreipiamas dėmesys į vykstančias organizacines permainas, grindžiamas informatikos plėtra. Reikėtų išnagrinėti ACM rekomendacijas informacinių sistemų magistro programoms, nors jos šiuo metu yra peržiūrimos, siekiama daugiau dėmesio skirti verslumui, organizaciniams pokyčiams, informacijos saugumui remiantis pažanga informatikos srityje.
5. Programos turinio peržiūra turėtų užtikrinti, kad studentai per savaitę apytiksliai skirtų 40 būtinųjų valandų savo studijoms ir užtikrintų, kad savarankiškų studijų laikas būtų tinkamai valdomas bei išnaudojamas. Programoje turėtų būti daugiau pasirenkamųjų ir laisvai pasirenkamųjų dalykų.

6. Studijų galimybė neįgaliems studentams turėtų būti suteikta tam, kad užtikrintų geresnę jų įtrauktį į studijų procesą. Auditorijose reikėtų įrengti elektros lizdus studentų asmeniniams nešiojamiems kompiuteriams. Patalpose reikėtų padidinti belaidžio interneto stiprumą.

7. Nors VU KHF turi prieigą prie įvairių duomenų bazių, studentai ir dėstytojai nurodė, kad reikėtų apsvarstyti galimybę pasirinkti daugiau duomenų bazių ir jiems suteikti prieigą prie jų. ACM ir IEEE skaitmeninės bibliotekos suteiktų prieigą prie populiariausių tarptautinių leidinių.

8. Reikėtų atnaujinti įrangą (kompiuterius, baldus ir kt.) ir patalpas.

9. Reikėtų pradėti įgyvendinti vertinimo proceso kokybės valdymą. Tokie žingsniai turėtų sumažinti galimybę studentams sumenkinti baigiamojo egzamino svarbą prieš tai ypač gerai išlaikant testus ir atliekant praktinį darbą. Be to, magistro studijų programoje nereikėtų pateikti klausimų su keliais atsakymo variantais.

10. Vertinimo kokybės valdymo procesai turėtų suteikti pasitikėjimo, kad studijų rezultatai yra pasiekiami, studijų keliamo iššūkio lygis yra atitinkamas, o išorės agentūra įvertins vertinimo metodus kaip pakankamai pagrįstus. Baigiamojo darbo tema turėtų atspindėti studijų programą, baigiamasis darbas turėtų būti grindžiamas darbu, atliktu per paskaitas, ir atspindėti tai, kaip susijungia verslas bei informatika.

11. Reklamuojant šią studijų programą reikėtų pabrėžti įtaką būsimajam absolvento darbui, pvz., išryškinant inovacijų vaidmenį, poveikį organizaciniams pokyčiams.

12. Skirti dėmesio priėmimo procesams, kad būtų nuolat palaikomas priimtinas kandidatų skaičius ir mokytis įstotų stiprūs studentai. Reikėtų imtis veiksmų, kad studijų programa susidomėtų skirtingų sričių studentai.

13. Reikėtų pasistengti, kad apie socialinių partnerių atstovą Studijų programos komitete žinotų visi socialiniai partneriai ir kad tokio asmens vaidmuo bei visų socialinių partnerių vaidmenys būtų aiškūs. Reikia (anonimiškai) paklausti buvusių studentų apie jų požiūrį į studijų programą jiems baigus studijas ir pristatyti ją Studijų programos komitetui.

14. Jei studentai teikia grįžtamąjį ryšį apie savo studijų programą, juos reikia informuoti apie jo efektyvumą ir visų nuoseklių pokyčių veiksmingumą. Studentų ir socialinių partnerių grįžtamąjį ryšį reikėtų atidžiai dokumentuoti ir pateikti svarstyti Studijų programos komitetui.

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

Vertėjos rekvizitai (vardas, pavardė, parašas)