



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus Gedimino technikos universiteto

SPAUDOS INŽINERIJA (612H74001)

VERTINIMO IŠVADOS

**EVALUATION REPORT
OF *PRINTING ENGINEERING (612H74001)* STUDY
PROGRAMME**

at Vilnius Gediminas Technical University

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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	<i>Spaudos inžinerija</i>
Valstybinis kodas	612H74001
Studijų sritis	technologijos mokslai
Studijų kryptis	gamybos inžinerija
Studijų programos rūšis	universitetinės
Studijų pakopa	pirmoji
Studijų forma (trukmė metais)	nuolatinė (4)
Studijų programos apimtis kreditais	240
Suteikiamas laipsnis ir (ar) profesinė kvalifikacija	gamybos inžinerijos bakalauras
Studijų programos įregistravimo data	2001-08-02, Nr.1187

INFORMATION ON ASSESSED STUDY PROGRAMME

Name of the study programme	<i>Printing Engineering</i>
State code	612H74001
Study area	technological sciences
Study field	production and manufacturing engineering
Kind of the study programme	university studies
Level of studies	first
Study mode (length in years)	full-time (4)
Scope of the study programme in credits	240
Degree and (or) professional qualifications awarded	Bachelor of Production and Manufacturing Engineering
Date of registration of the study programme	02-08-2001, No.1187

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I. INTRODUCTION

Vilnius Gediminas Technical University (VGTU), established in 1956, offers a first level university study programme on *Printing Engineering* since 2010. Before that was called as *Polygraphy*, whereas the specialization was developed in 2001 by Department of Printing Machines belonging into Faculty of Mechanics in the study program of *Industrial Engineering* according to the needs of Lithuanian economy. The curriculum became independent in 2009, and has been redesigned in 2010-2011. During previous assessment in 2004 it was recommended to the University to find balance between general university education course units, the ones of the fundamentals of the study program and the specialized course units; to include optional subjects; to invite industry representatives to motivate and teach students; to update course books in Lithuanian; and to look for opportunities to expand and update laboratories. The Bachelor-programme lasts 4 years and is equivalent to 240 ECTS credits.

This written evaluation is based on the content of self-assessment report made by the self-assessment team of the Bachelor's Programme in *Printing Engineering*, and on the observations of the discussion carried out during the visit at Vilnius Gediminas Technical University (VGTU) on October 4, 2012.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

Programme of *Printing Engineering* gives degree of Bachelor of Production and Manufacturing Engineering, taught at Faculty of Mechanics, more specifically at Printing Machines Department. It supports development of the country. Printing industry itself is not outlined in national or regional policies. At the same time the printing engineering has proved its export potential, the importance of the study programme to Lithuania is growing.

The aims and learning outcomes of the programme have been briefly described and categorized in the self-assessment report of VGTU. The developed programme aims are typical to Production and Manufacturing Engineering Bachelor's level education with certain accent to printing technology (General Printing Engineering and Printing Materials; Polygraph Production Quality Management and Optimization; etc.). The students, graduates and employees agreed that the aims of the programme meet requirements for this first level university programme. The graduates are employed in major Lithuanian printing companies; there is increasing need for graduates due strong printing industry, supported by LISPA (Lithuanian Printers' Association). The learning outcomes are inclined towards printing applications, but the programme shares the part of general engineering training with study programmes Innovative Production Engineering (612H70003), and Production Engineering and Management (612H77001), allowing thus broader variety of suitable curricula for proceeding into Master's level education.

The expected learning outcomes have been described on the basis of four categories as knowledge, cognitive understanding, and practical abilities on special skills, and transferred (general) abilities. The study programme was revised in the years 2003, 2007 and 2011, thus continuous changes have been made, and their positive effect was explained during experts' visit. The Printing Engineering study program is fit for preparation specialists of the level of qualification VI.

The Printing Engineering programme was born as Polygraph experts working in Lithuania were foreigners, in the early 90' was necessary to train a new generation of specialists, because despite the leave of many of the foreigner experts the sector remain important for the country. The decision to move to a new programme and not keeping specializations was made as the majority of courses of year 1-2 are in common; the specialization courses are predominant

from year 3. The developed study programme's aims are identifiable from the beginning. This choice is beneficial for Printing Engineering, as this industry has strong economic impact and significant exports output.

The name of the programme is adequate. The drop-out percentage in the Printing Engineering programme is significantly better than average and clear identification of the Printing Engineering; students choose narrow subjects and are more aware of their choice. The learning outcomes are described broadly, causing involvement of several small (3 ECTS) courses in curricula. The majority of the learning outcomes are general to mechanical engineering but there are also those specific to the programme. The learning outcome Z4 (general knowledge of the technologies necessary in printing engineering) does not emphasize all the needed changes. In context of increasing importance of 3D printing and related rapid prototyping and manufacturing technologies (e.g., selective laser sintering (SLS), fused deposition modelling (FDM)) this knowledge should be included. General skills lack knowledge of Media, which is strongly stated in comparative bachelor level programmes in universities worldwide. At the same time learning outcomes favour collaboration among lecturers, in terms of course contents, and facilitate the establishment of structure and contents of the master. Course card system provides a clear path to be followed for ensure course quality. The type of courses (A, B, C: specialization) is related to the type of learning outcomes.

2. Curriculum design

The curriculum design meets legal requirements, set by the Ministry of Education and Science for the first cycle study programme. It consists of 240 ECTS credits, from which 39 ECTS are directly related with specialty. 8 ECTS are for free studies. 18 ECTS dedicated for the final thesis.

The number of study subjects does not exceed 7 courses per semester. The study modules are divided equally between 7 terms, leaving 15 ECTS from last semester for thesis preparation. There are four elective sub modules with altogether 12 alternative courses.

The structure fit well, but some of the courses are inclined towards printing technologies without obvious reasoning ("Polygraph Production Quality Management and Optimization"; "Informative Technologies and Design of Printing Trades"). "Fundamentals of Human Resource Management, Industrial Marketing and Logistics" is an ambitious course giving only 3 ECTS, whereas Logistics only should be taught in more extensive amount. Packaging techniques are important in printing engineering, but there was not any special course in study plan. Study visits are organized to the companies in terms of specialized course subjects or during Professional Practice. The programme is tightly connected with enterprises in reality.

The programme design appears to be oriented on the national labour market but gives less perspective to further studies on Master's level. The programme has been improved, as it is possible to choose free courses, such as Total Quality Management and Organizational strategy, which are complementary to the mainly technical subjects. The project/problem based learning is applied, e.g., in CAD/CAM: the learned theoretical knowledge have to be applied, the skills are tested with an assignment where the students are required to design an assembly and its operations.

The transformation of the programme specialization into separate Printing Engineering is positive. Frequent modifications to the programme and a strong collaboration with companies is grounded as printing sector in Lithuania is more advanced than other sectors (such as machine building, where the majority of companies are using old well-known knowledge), thus new requirements and new technologies are reflected. The companies are eager to collaborate so that students are aware of these needs and can solve them using the new technologies. Various printing houses are involved, each presenting their most modern equipment according to the applied technology. The collaboration is fruitful because the equipment is modern and the printing sector has good technological level.

The changes made in the programme with the increased importance of digital material are compliant with future challenges. After the printing bachelor graduates, the majority of students who continue in university will chose Printing Master (technological aspects) or Industrial Engineering and Innovation Management. Is it possible to move from one bachelor programme to another, as many courses are in common in year 1-2. Students like the early introduction into specialization subjects as well as the considerable amount of practice and laboratory done in printing houses. To improve English skills, it is proposed to provide some courses or lessons, e.g. about printing machines in English.

3. Staff

The teaching staff meets legal requirements. The lecturing are hold by 54 people, who are experienced in academic teaching, including 12 professors. The number and qualification of staff members is adequate, and teaching load is spread evenly. The percentage of teaching staff members being over 60 years old is relatively high 35 %. There is exchange of teaching staff with universities abroad. Annual organization and staff members participation of the international conference „Mechatronic Systems and Materials“ helps in terms of research and development. There are 8 patent applications, but as Lithuania has patent filing system, the novelty of national patents is not evaluated. 6 patent applications are filed to US and European Union, what is a good result. Industry is helping in university research by providing topics for thesis. Staff members have adequate selection of software for their research.

The academic mobility is used every year. There is positive trend in academic staff members' mobility. Every 5 years all professors go to internships (1-6 months) in companies or research centres for updating their knowledge and keep the contact with practical applications. 15-16 innovation vouchers demonstrate the collaboration among the faculty and companies in applied research. It is difficult to attract teaching staff from outside, especially from the industry because the salaries are not attractive, the industrial experts lack appropriate academic degrees. Also the majority of PhD students go to industry.

Teachers were aware of the programme learning outcomes. Lecturers do internships related to their teaching subjects. The lecturers' activities are evaluated. The quality of courses/lecturers is evaluated by students thanks to informatics questionnaires, this data are used for lecturer certification. The lecturer has access to its own evaluation. The dean has access to all the evaluations. Lecturers with not sufficient quality score are encouraged, with private discussion, to improve their courses on the basis of the students' remarks. Receiving funds from the university to go to conferences is difficult, a prior approval by the National Council of Science helps to also obtain university support. Using project funds for going to conferences is easier.

The research of teaching staff is related directly with printing engineering in some extent, more people is related with vibrations engineering, essential in paper machinery. LISPA has established own business-science committee dealing with the research cooperation with university.

4. Facilities and learning resources

The premises for study process have been improved and facilitate the amount of students. The equipment and software of classrooms, computer labs have been improved, and there is clear progress is updating laboratory equipment. Laboratories of Theory of Mechanisms and Machines and Machine Elements are serving also other student specializations. The provided equipment by university is serving also printing industry needs. Students mentioned, that university facilities are not supporting enough canteen possibilities, and kitchen and bathroom equipment in dormitories are rather old, at the same time they were happy for affordable price level. Good sport facilities (stadium, tennis area) are located in this university. Student liked

arrangement of the laboratories; all equipment placed in one place makes easy to use it. 6 specialized laboratories with special equipment are still foreseen by EU programmes in 2014-2020. The equipment renewal process needs to be proceeded; the teaching process relies very much onto industry. Agreement with LISPA includes long-term planning and co-operation statements. Facilities allow possibility to study at night. Facilities include good IT support and many available software licenses, also available to students outside the department. The bottlenecks include lack of a 3D scanner and 3D printer possibilities, necessary for further advancement.

Centre of the career is not offering practice places and job offers. Students are looking for these offers in labour market and asking help for teachers. Teachers take care also from offering practice places and job offers, students appreciated their positive attitude and help in practice organising. It is actually easy to find a good job, even during the bachelor studies; usually this happens after the start of the practices. The professional practice is enough; students spend a lot of time at printing houses. The students have deep knowledge of technological and management aspects and they are well prepared for teamwork. The practice has been anticipated to year 2 and some specific courses and visits to printing houses are done in year 1.

The library units are equipped with related textbooks and specific scientific journals. Access to library collections and databases through computer network to students and academic staff members was made convenient. There are a good library and corresponding literature databases. The library participates in development of national integrated academic electronic library. Additional course specific material has been worked out from the academic. There were several textbooks published by staff members recently in Lithuanian. Educational videos about printing industry could be a possibility. Students were satisfied with existing study materials and literature. The recent shift to e-learning environment Moodle (before some teachers' uploaded material on university website) creates good opportunities. The project/problem based learning is applied, e.g., in CAD/CAM: the learned theoretical knowledge have to be applied, the skills are tested with an assignment where the students are required to design an assembly and its operations.

5. Study process and student assessment

Student admission rules are clearly described and easily accessible. The students can propose the subjects for the topics of projects and final works. The 4th year students already work and are encouraged to propose a subject related to their job and the company need (either with more technological or more managerial emphasis). Concerning research activities the teachers are always asking opinions about what can be improved, student suggestions are taken into account. Co-operation with LISPA have enabled to integrate innovative elements into the lectures so that the graduates are fully aware of the technological innovation and are able to use them e.g., theoretical lessons about fundamentals of printing are followed by theoretical lessons about specific machines, demonstration and use by the students of these machines in the printing houses (6 hours/week for 16 weeks laboratory in printing houses).

Students are encouraged to join mobility programs. ERASMUS contracts exist with several European universities. The audit team met several students, who successfully performed abroad studies. Students are supported in study process by teachers in all running questions. Cosy atmosphere was founded at this faculty and good relationship between students and teachers.

The audit team had the opportunity to interview graduates from this programme and potential employers. A clear description of the students' performance assessment is provided with the so called study module cards. This first attempt for a detailed analysis of learning outcomes and the evaluation process of students' performance has been very well appreciated by the peers. Graduates from this programme are satisfied with their academic education and

employers are satisfied with graduates. Thus, the programme has written a success story so far. The alumni emphasized received knowledge, both theoretical and practical. Many of them started to work soon while doing the bachelor, due to the lack of printing specialists. Thanks to the studies new theoretical knowledge has been introduced while in companies is possible understanding how to apply them in real situations. Some graduates are already more involved into management tasks, however for all of them the acquired technical knowledge were fundamental for doing correctly the management. For those who want strongly to innovate the printing sector is needed more theoretical and practical knowledge, which can be acquired with the Printing master.

6. Programme management

The BSc programme is managed by Faculty of Mechanics. The Department of Printing Machines in this has a long-term experience of study organization. The responsibilities for monitoring and decision-making are clearly allocated. The curator of the 1st cycle programme appointed by Dean has been active in continuously advancing the study program.

Feedback is regularly collected and analysed from students, alumni and employees. At the end of each semester there are questionnaires related to this study program and competence of the teachers filled by students. Alumni Club of graduates of VGTU and the Faculty of Mechanics is extending. Agreements with industry (LISPA) offer strong support in organizing practice and laboratories visits. The alumni interact actively with the university. A follow up programme has been started to keep the contacts (e-mails, etc.) with graduates and increasing the collaboration with them.

The collected feedback outcomes have been implemented into programme development. The employers were satisfied with the graduate competences, the graduates have the required theoretical and practical competences, and in fact they can become autonomous in 3 months. Several agreements exist between the faculty and the LISPA, the faculty is also a member of the association. LISPA has a special committee for the research activities; this committee facilitates the interactions between scientists and companies. There was initiated a project "Improvement of Practices of Students of Printing and Publishing study programs" with LISPA.

In order to favour the involvement of students in practical work at companies, specific persons in companies have been trained to be industrial tutors. Thanks to the close collaboration faculty-industry all the changes in the sector are rapidly detected, discussed collaboratively and can be integrated in the programme. The young specialists are flexible and able, thanks to their studies, to tackle the various innovation challenges. Employers appreciated the willingness to do industry related projects of the students. The bigger companies need the competences of both bachelor and master, so students are encouraged to proceed in Master level.

The programme runs well and provides a solid education in engineering sciences. A great progress to meet European standards has been made during the latest reform, which has been based of prior evaluations. The audit team appreciates the efforts which have been made within the EU funded project on study quality improvement, increasing internationalization and lifelong learning activities. Evaluation of students' performance and students' satisfaction are established for this programme. Students reported that their comments are reflected by the teachers. Also a quite good system for the feedback of employers and graduates appear installed. The final graduation committee for example is assembled with externals too.

The internal quality assurance measures are effective and efficient. In total the internal quality management appears well installed according to EN ISO 9001:2000 standard.

III. RECOMMENDATIONS

1. Learning outcomes (LO) are described broadly; it is suggestible to include novel technologies, but also media and communication into LO.
2. Printing Engineering is not mentioned in national nor regional policies, it is advisable to clearly define importance of this sector.
3. There are several small (3 ECTS) courses, it is recommended to optimize curriculum towards larger courses having solid and concrete LO-s.
4. Some courses are suggested to be taught in English, so it could improve globalization, but also activate cooperation in terms of Erasmus students and lecturers.

IV. SUMMARY

A 1st level university study programme with high potential for labour market in a future oriented field has been analysed. Essential progress has been made for renewal of laboratory equipment, but connections of the curriculum to be supported by national programme remained unclear. The study programme is consistent and in agreement with local legal rules.

The content of the bachelor programme is driven rather from local industrial. Programme aims are well set. There is growth of the industry and shortage of engineers in printing sector (mainly large and service-oriented enterprises). The study programme addresses a real on-going need of providing manpower to fill vacancies in companies in the general engineering sector of the Lithuanian economy. Therefore graduates are very likely to find employment. The skills set also means that graduates have a wide range of employment opportunities. Beside mechanical engineering, which accumulates largest part of the subjects, technological side of the programme also includes materials engineering. Learning outcomes are described in overall manner.

Curriculum has applicable nature in printing industry needs. At the end of each semester there are questionnaires related to this study program, and competence of the teachers, filled by students. The teaching staff is preparing nationally competitive graduates, involving industry specialists in study process. All full-time teachers are well qualified, sufficiently experienced and meet the qualification requirements. Friendly atmosphere was founded on this department and between teachers and students. Regarding facilities and learning resources there are adequate lecture rooms, developing laboratories and good library facilities, also some good materials engineering devices and facilities suitable for engineering education. There is long-term strategy to modernize the laboratory equipment and facilities. Students liked arrangement of the laboratories, all equipment placed on one place, also outlined good sport facilities (stadium, tennis area). At the same time the renewal of laboratories is still in process and depends upon 2014-2020 EU financing.

Study process and student assessment are well-organized, the students are satisfied with Bachelor's programme. Best students get state financed places, and there is high employment rate of graduates. There was no problem to align study credits for students, who came back for Erasmus. Schedules of lectures are adapted to students' demands. Alumni and employers were involved in study process and supported it through LISPA or directly by providing practice/laboratories possibilities.

Programme management is efficient, showing clear progress on the on-going improvements. Cooperation with LISPA is structured and proved both in short- and long-term timescale. In terms of programme structure and contents, required competences and IT resources of the innovation in printing industry are continuously monitored, the programme is modified accordingly (introduction course of 3D printing), and the resources are acquired directly or thanks to the collaboration with the LISPA.

V. GENERAL ASSESSMENT

The study programme Printing Engineering (state code – 612H74001) at Vilnius Gediminas Technical University is given positive evaluation.

Study programme assessment in points by fields of assessment.

No.	Evaluation Area	Evaluation Area in Points*
1.	Programme aims and learning outcomes	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)	4
6.	Programme management (programme administration, internal quality assurance)	4
	Total:	20

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

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

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

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

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**VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETO PIRMOS PAKOPOS STUDIJŲ
PROGRAMOS *SPAUDOS INŽINERIJA* (VALSTYBINIS KODAS – 612H74001) 2012-12-
20 EKSPERTINIO VERTINIMO IŠVADŲ NR. SV4-170 IŠRAŠAS**

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Vilniaus Gedimino technikos universiteto studijų programa *Spaudos inžinerija* (valstybinis kodas – 612H74001) 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	4
6.	Programos vadyba	4
	Iš viso:	20

* 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

Buvo įvertinta pirmosios pakopos universitetinių studijų programa, kurios sritis turi didelį potencialą darbo rinkoje ateityje. Padaryta reikšminga pažanga atnaujinant laboratorinę įrangą, tačiau programos turinio ryšiai, kurie turėtų būti remiami nacionalinėje programoje, išlieka neaiškūs. Studijų programa yra nuosekli ir atitinka vietos teisinės taisyklės.

Bakalauro studijų programos turinį nulemia vietos pramonės poreikiai. Programos tikslai yra gerai parinkti. Pramonė auga ir pastebimas spaudos sektoriaus inžinierių trūkumas (daugiausia didelėse ir į paslaugų teikimą orientuotose bendrovėse). Studijų programa siekiama patenkinti realų nuolatinį specialistų, kurie užpildytų darbuotojų spragas bendrosios inžinerijos sektoriaus bendrovėse Lietuvoje, poreikį. Dėl šios priežasties absolventų galimybės įsidarbinti yra didelės. Įgyjami įgūdžiai taip pat reiškia, kad absolventams atsiveria plačios įsidarbinimo galimybės. Be mechanikos inžinerijos, kuri sudaro didžiausią dalykų dalį, technologinė programos dalis apima ir medžiagų inžineriją. Studijų rezultatai aprašomi apibendrintai.

Studijų programos turinys pritaikomas spaudos pramonės poreikiams tenkinti. Kiekvieno semestro pabaigoje studentams pateikiami klausimynai apie studijų programą ir dėstytojų kompetenciją. Dėstytojai rengia nacionalinėje rinkoje konkuruoti gebančius absolventus į studijų procesą įtraukdami ir pramonės specialistus. Visi visu etatu dirbantys dėstytojai yra kvalifikuoti, pakankamai patyrę ir tinka darbui pagal kvalifikacinius reikalavimus. Tiek katedroje, tiek tarp

dėstytojų ir studentų vyrauja draugiška atmosfera. Kalbant apie materialinius išteklius, programa turi tinkamas auditorijas paskaitoms, ryškinimo laboratorijas, gerą biblioteką, taip pat esama gerų medžiagų inžinerijos prietaisų ir patalpų, tinkamų inžinerijos srities ugdymui. Yra parengta ilgalaikė laboratorijos įrangos ir patalpų modernizavimo strategija. Studentams patinka laboratorijų išdėstymas, įrangos patalpinimas vienoje vietoje, jie taip pat minėjo ir gerą sporto bazę (stadionas, teniso kortas). Vis dėlto laboratorijų atnaujinimas dar vykdomas ir priklausys nuo 2014–2020 m. ES finansavimo.

Studijų eiga ir jos vertinimas yra gerai organizuoti, studentai yra patenkinti bakalauro studijų programa. Geriausiai studentai patenka į valstybės finansuojamas vietas, absolventų įsidarbinimo rodikliai yra aukšti. Iš studijų pagal ERASMUS programą grįžtantiems studentams nekyla problemų perkeltant kreditus. Paskaitų tvarkaraštis sudarytas atsižvelgiant į studentų poreikius. Absolventai ir darbdaviai dalyvavo studijų procese ir jį rėmė per LISPA arba tiesiogiai suteikdami galimybes atlikti praktiką / dirbti laboratorijose.

Programos vadyba yra efektyvi, pastebima aiški pažanga įgyvendinant nuolatinis patobulinimus. Bendradarbiavimas su LISPA yra struktūrizuotas ir pasiteisino tiek trumpalaikiu, tiek ilgalaikiu požiūriu. Kalbant apie programos struktūrą ir turinį, reikalingos kompetencijos ir IT išteklių skirti inovacijoms spaudos pramonėje nuolat stebimi ir programa atitinkamai koreguojama (įvestas 3D spausdinimo studijų dalykas), o reikalingi išteklių įsigijami tiesiogiai arba bendradarbiaujant su LISPA.

III. REKOMENDACIJOS

1. Studijų rezultatai aprašyti plačiai. Patartina į studijų rezultatus įtraukti naujas technologijas, taip pat medijas ir komunikaciją.
2. Spaudos inžinerija neminima nei nacionalinėje, nei regioninėje politikoje. Patartina aiškiai apibrėžti šio sektoriaus svarbą.
3. Esama kelių smulkių (3 ECTS) studijų dalykų. Rekomenduojama sustiprinti studijų turinį ir orientuotis į didesnės apimties dalykus su svariais ir konkrečiais studijų rezultatais.
4. Siūloma kai kuriuos dalykus dėstyti anglų kalba. Dėstymas anglų kalba ne tik pagerintų pasaulietiškumą, bet ir suaktyvintų bendradarbiavimą turint omenyje ERASMUS studentus ir dėstytojus.

<...>

Paslaugos teikėja patvirtina, jog yra susipažinusi su Lietuvos Respublikos baudžiamojo kodekso¹ 235 straipsnio, numatančio atsakomybę už melagingą ar žinomai neteisingai atliktą vertimą, reikalavimais.

¹ Žin., 2002, Nr.37-1341.

Vertējos rekvizitai (vardas, pavardē,
parašas)