STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

KLAIPĖDOS UNIVERSITETO

STUDIJŲ PROGRAMOS

Pramonės elektros įranga ir automatika (621H60002)

VERTINIMO IŠVADOS

EVALUATION REPORT OF

Electrical equipment and automatics in industry (621H60002)

STUDY PROGRAMME

at ***Klaipėda University***

Grupės vadovas:
Team leader: Prof. dr. Laszlo T. Koczy

Grupės nariai:
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Išvados parengtos anglų kalba
Report language - English

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DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

Studijų programos pavadinimas	**Pramonės elektros įranga ir automatika**
Valstybinis kodas	621H60002
Studijų sritis	Technologijos mokslų studijų sritis
Studijų kryptis	Elektronikos ir elektros 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	Elektros inžinerijos magistras
Studijų programos įregistravimo data	2009-08-31, Nr. 1-73

INFORMATION ON EVALUATED STUDY PROGRAMME

Title of the study programme	**Electrical equipment and automatics in industry**
State code	621H60002
Study area	Technological sciences
Study field	Electronics and electrical 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 Electrical Engineering
Date of registration of the study programme	2009-08-31, No. 1-73

CONTENTS

I. INTRODUCTION

The Electrical Engineering studies are concentrated within the Faculty of Marine Engineering of Klaipėda University, which consists of 8 departments. The updated study programme "Industrial Electrical Equipment and Automatics" is devoted to prepare highly qualified electrical engineering and automatics specialists for the fast growing industry.

Klaipeda is an important Lithuanian town with its harbor and developed industry, such as the Shipbuilding and Stevedoring Companies, Dockyards, Ferry and Cruise Terminals, International Logistics Centre, Klaipėda and Būtingė Oil Terminals and a lot of other new and developing enterprises, which lack highly qualified Electrical Engineering specialists. The International Logistic Centre, the International Airport in Palanga, the main Lithuanian highway Vilnius-Klaipeda, and the Klaipeda Free Economic Zone, attracted in the last years big international companies like "Philips Morris", Master food", "Siemens", Yazaki Wiring Technologies","Litagros chemija","Orion Global PET" and a lot of others which demand Electrical Engineering specialists of high qualification.

The study programme under evaluation is the Master programme "Industrial Electrical Equipment and Automatics" which runs under the supervision of the Electrical Engineering Department. Despite the fact that in the SER p.12 it is written that there is "Electrical engineering" Master study programme with two specializations: "Industrial electrical Equipment and Automatics" and "Ship Electrical Equipment and Automatics" (p.12), this is a self standing specialization at present, with a self standing code.

The expert team visited Klaipeda University on 27– 28 of February, focusing on the "Electric equipment and automatics in industry" programme on the second day of the visit at Klaipeda University. The following report is based on the on site discussion and the SER provided by the Klaipėda University team well in advance.

The last assessment of the study programme by international committee was done in 2010.

The following team carried out the evaluation: Prof. Dr. László T. Kóczy (team leader), Ass. Prof. Dr. Marios Kasinopoulos, Prof. Dr. Mart Tamre, Prof. Dr. Roma Rinkevičienė, Dr. Artūras Klementavičius and Gražvydas Jakaitis who all visited Klaipėda University.

II. PROGRAMME ANALYSIS

1. Programme aims and learning outcomes

Based on the programme aims and learning outcomes stated in the SER, the Master programme "Industrial Electrical Equipment and Automatics" is more generally defined as an Electrical Engineering programme and does not include specific aims and outcomes for industrial electrical equipment and automatics. Nevertheless the learning outcomes and the programme aims are clear and publicly accessible. They refer to Knowledge and Understanding, Engineering Analysis Abilities and Skills, Engineering Design Skills, Investigation Abilities, Engineering Practice Abilities, Transferable Skills in the area. The aims and learning outcomes of the study programme correspond to the mission of Klaipėda University.

The programme aims and learning outcomes are based on the Technology Study Regulations issued by the Ministry of Education and Science of Lithuania, the labour market demand and the employers' interest and students' expectations.

The programme aims and learning outcomes are consistent with those of highly professional Master of Electrical Engineering specialists. The "Industrial Electrical Equipment and Automatics" study programme is a knowledge enhancing programme, where the majority of subjects are continuation of respective Bachelor study programme subjects at a new, higher level. In accordance with the programme, the learning outcomes expect students to have acquired deeper knowledge and understanding, engineering analysis, engineering design skills, investigation abilities and engineering practice as well as transferable skills.

The reviewers confirm that the name of the programme, it's learning outcomes, content and qualifications offered are compatible with each other and are suitable to provide the specialists with abilities to long-life learning and competitiveness in the labour market.

Meeting with the SER preparation group allows stating that the study aims and outcomes were defined by observing the new regulations for MA degree studies and the aim and outcomes have been discussed in the department regularly. Staff members, working also in the industry, have given a number of proposals to that. The SER preparation group clearly understands the difference between the BA and MA study programme aims. The MA studies introduce such areas as diagnostics, special machines and deeper analysis of reference sources, and provide students with a wider scope of knowledge and with scientific research skills. During the visit the experts were introduced to the research and final theses of MA students. The students carry out research activities in the long term popular area of electric machines, among others, and in areas of renewable energy as well in electromagnetic pollution (from radars, high voltage electric lines and telecommunications).

Representatives of the SER group stated that they all took part in developing the programme and did so step by step. They also have a student member in the study programme committee.

The administration provides teachers with a training for monitoring the programme in the way of interviewing students, and taking into consideration also opinions from the industry.

2. Curriculum design

Reviewers can state that the curriculum design of the Master programme "Industrial Electrical Equipment and Automatics" (state code – 621H60002) meets the legal requirements. The Master programme "Industrial Electrical Equipment and Automatics" is well designed and obviously is a demanded programme among students. The total study volume is 120 ECTS (in the SER some mistakes can be found as at some points the number of national credits – 80 was left (SER, page 12), nevertheless the curriculum is made up of 120 ECTS. Study duration is 2 years (4 semesters).

The programme is designed as a Full-Time programme with the duration of two years. It offers 30 ECTS per semester and 60 ECTS per year. The total amount of credits during two years is thus 120 ECTS.

Nevertheless, according to the SER (pages 12-13) the programme content comprises 132 cr; the sum of credits of subjects in Special education (36 cr.), Enhancing field (29 cr.), Engineering field (18 cr.), Scientific Research work (49 cr.) is namely 132.

The programme is developed in accordance with the legal regulations: The description of General Requirements of Master study programmes, the order of the Minister of Education and

Science No ISAK-1551, dated by 22nd of July, 2005 and the general regulations of technological (engineering) studies, approved pursuant to the order No. ISAK-734 dated by 29th of April, 2005, of the Minister Education and Science.

Nevertheless, the following recent legal regulations are not mentioned: Lithuanian Republic Science and Study Act (Valstybės žinios, 2009, Nr. 54-2140) and "Description of general requirements for Master Study programmes", approved by the order of the Minister of Education and Science, Lithuanian Republic No V-8 26 dated by 3rd of June 2010.

Study subjects – modules are spread evenly. The number of study subjects does not exceed five subjects per semester. The themes are not repetitive and allow enhancing of electrical engineering knowledge and skills.

Moreover, the content of the subjects is consistent with the type and level of the studies. The subjects "Research and innovation fundamentals", "Modern methods of Power Electronics System modelling", "Advanced methods of minimizing EMI", "Embedded control systems of Green and Blue energy flow", "Offshore and Marine Alternative Energetic Systems" are sound and discrete at Master level, and they have obvious academic and professional interrelationships. It is evident that the scope of the programme is sufficient to achieve the learning outcomes.

The content of the programme reflects the latest achievements in science and technology. The inclusion of such new subjects as "Modern methods of Power Electronics System modelling", "Advanced methods of minimizing EMI", "Embedded control systems of Green and Blue Energy flow", „Offshore and Marine Alternative Energetic systems" provides scientific considerations of modern problems.

3. Staff

The study programme is provided by the staff meeting all legal requirements. In the Master study programme 33.33% of lectures are delivered by professors (required 20%), and 55.56 by associate professors. In total about 89 % of lectures are conducted by staff with scientific titles (required 80%). Reviewers confirm that the composition of staff and its qualification is suitable to work successfully in the Master programme to ensure the learning outcomes.

The number of teaching staff is also adequate to ensure the learning outcomes. The self evaluation report provides 8 CV's of teaching staff holding scientific degrees. The general academic workload with the students of "Industrial electrical equipment and Automatics" study programme in 2009/2010 was 1539 academic hours, for professors 264 hours, assoc. prof. 761 hours, lecturers 174 h. This is acceptably even, regarding other courses as well.

In 2013 three PhD students defended their theses and started to work as staff in the Electrical Engineering department. In this way some turnover of teaching staff has happened ensuring adequate provision of the programme. The turnover of teaching staff improved the staff composition in age. There are two further young PhD students in the department, who are doing their thesis with other universities. The team suggests that the department should obtain the rights to establish (may be in connection with other universities) its own PhD programme in Electrical Engineering.

Klaipėda University and the Electrical Engineering Department create conditions for the improvement of the teaching staff's professional competence necessary for the provision of the programme: they take part in scientific conferences, give lectures in the frame of external exchange programmes at foreign universities. Prof. E. Guseinoviene worked as a visitor at the French Savoy University, at the University of Rostock in Germany in 2009; A. Andziulis worked in the LATLIT INEREG project "Joint education and training center for high technology development; prof. E. Guseinovienė in 2009-2012 in South Baltic INTEREG project "LED – Increasing Saving Energy though Conversion to LED lighting in Public Space", further in Mechatronics projects and others.

The teaching staff of the programme is also involved in scientific research of linear oscillating machines and their control, directly related to the study programme. The reviewers found, that the staff is rather competent for MA programme. They carry out research work and have publications in ISI journals, but these possibilities are spread rather unevenly among them.

At the meeting with teaching staff the reviewers found, that teachers also had distance learning practice, several of them used the Moodle virtual environment.

Nevertheless, the teaching staff should intensify their research and publish more papers in journals with citation index, especially major international ones, among others, because such research results allow an increasing number of "baskets" and number of entering students.

The teaching staff mobility is rather not good and it is spread unevenly. Only a few of them did take part in Erasmus teaching mobility based on what the experts found in the SER and on site visit. Mobility should be further increased and extended to all staff members evenly.

Specifically, establishing PhD Committee alone or with other universities in Electrical Engineering should significantly increase scientific activities of teaching staff and number of publications in the international cited journals as well.

4. Facilities and learning resources

Reviewers state that the premises for students are adequate both in their size and quality. Four classroom-laboratories located in the department with are available for studies, 20-36 seats for lectures or 16-24 seats for laboratory work and a smaller classroom with 10 seats for lectures or 12 seats for laboratory work is also there. For special "assembly-type" events (as unique lectures, seminars, presentations, conferences) the Programme students get access to the facilities in a modern *Aula Magna* building (also called *Studlendas*) located in a new University Campus. These facilities comprise the perfectly-installed auditoria and a conference hall and should be ordered in advance. The students also use some spaces in this building for individual work purposes.

Some laboratory equipment is still old, but the laboratories are dynamically improving. Namely, the Electronics, Mechatronics, Electrical Engineering and Automation laboratories of Electrical engineering department have been updated in 2012. New equipment has been purchased to teach modern subjects. Several modern laboratories were established (as laboratory of alternative energy sources and smart house applications).

Computer network infrastructure, equipment and software are maintained by the University Computer Centre. The majority of computers in computer rooms have suitable software (*MS Windows XP Professional/Windows, Vista* OS and *MS Office 2003/2007)* packages. The study programme students get adequate access to the modern modeling and simulation tools like MatLab Simulink, MathCAD, PowerSim Studio, Model Maker and Model Builder and others. As for the hardware, only a minor part of computers can be considered as falling out of the category "up-to-date".

Reviewers state that teaching materials (textbooks, periodical publications, databases) are adequate and accessible, the library is very good. The students have access to the subscribed electronic databases addressing electrical engineering field as IEEE/IET Electronic Library, ScienceDirect, EBSCO Publishing, Wiley Interscience, SpringerLink. The students also can use general search tools as Scholar Google, Lithuanian academic electronic library, Open Access Resources. In the faculty they have access to other Higher Education Institutions databases for example – KTU e-books and VGTU e-books are available.

5. Study process and student assessment

The Reviewers state that the admission requirements are well-founded, based on competition. The organization of the study process ensures an adequate provision of the programme and achieving of learning outcomes. The structure of the academic year is conventional: with two semesters and two examination periods. The timetable is constructed for both students' and teachers' convenience. The examination session schedule is developed according to the preferences of students.

Reviewers confirm that the students are encouraged to participate in theoretical and applied research activities. In this way in the department established a circle of students interested in robotics.

At present the programme has 6 second year students and 8 first year students (6 of them are state funded, one is funded by a company and one is a student from abroad, paying tuition fees). Students are in the average at the level with grade 8.

Students have the opportunity to participate in student mobility programme, but they are not involved in the Erasmus study programme and mainly take part in short excursions for robot competitions.

After meeting with the students and the staff it might be stated that their work does not have a seriously bad impact on their studies; they use the weekends and other free time for home study. Sometimes the study topics are close to the tasks at their employer, and they solve a part of their tasks at the job place (e.g. a student working at LESTO). Students have opportunity to individual consultations. The only foreign (Belgian) student sometimes has individual contact hours in the day time, sometimes join the group.

Students fill up questionnaires to provide the University with feedback.

The reviewers state, that the university ensures an adequate level of academic and social support for students. The academic support is provided by the Study administrator, the Dean of the Faculty, and the Head of Electrical Engineering Department, prof. Eleonora Guseinovienė.

The Department receives a lot of job proposals which are published at the faculty website. The financial support available includes University scholarships.

The reviewers confirm that the assessment system of the students' performance is clear, adequate and publicly available. Students' knowledge is assessed in parts. The final grade consists of the sum of assessment grades obtained in each part, multiplied by some weight coefficient.

Professional activities of the majority of graduates meet the programme providers' expectations. They successfully work in a wide variety of Lithuanian and foreign companies. Graduates are satisfied with the MA studies programme and the knowledge obtained. All of them have jobs, just 1 from 5 has changed his job; some of them got higher positions in their companies upon receiving the higher degree. One MA graduate, who entered this programme after "Information Technologies" BA programme explained that completing this programme was his purpose due to the special needs at the job and thus the study was useful for him. To the reviewers question about suggestions to change this programme, only one graduate working as a researcher in the area of robotics proposed to introduce a course about robotics or electrical vehicles. All others were completely satisfied. At present the elective subject "Mobile autonomous robots" is running. The graduates convinced the team of having enough knowledge related to entrepreneurship and project management. They are also satisfied with the helpful and competent teaching staff.

The topics of research work are reflected in the final theses. Some final theses, however, do not contain any real research work results.

6. Programme management

The reviewers state that responsibility for decision and monitoring of the implementation of the programme is sufficiently clearly allocated. Study programmes at the University are managed at three levels: Department, Faculty and University. Specifically, the role and performance of Study Programme Committee is not seen as evidently as it could be.

The reviewers confirm that information and data on the implementation of the programme are regularly collected and analysed using the internal self-assessment procedure. Students fulfill questionaires but they are not informed about Study Committee's decisions whether those are implemented the reality. Stakeholders are not involved in design of study programme. During meeting with reviewers became evident that they do not take part in the design or improvement of the programme and even do not know content of the programme.

The outcomes of the internal and external evaluations of the programme are used for the improvement of the programme: the following new advanced elective courses "Embedded Control Systems of Green and Blue Energy Flow" and "Costal and Marine Electric Systems in the Smart Grid" were offered; and the courses of "Modern Modeling Methods of Power Electronic systems", "Modern EMI Minimization Methods", "Costal and Marine Alternative Energy systems and "Ship serving and Costal Installation Power Electronic systems" were also introduced. These subjects are taught in both Master programmes "Electrical equipment and automatics in industry" and "Ship electrical equipment and Automation" and could serve as a basis of merging these two study programmes into one. Poor number of students in "Electrical equipment and automatics in industry" study programme and studentless programme "Ship electrical equipment and Automation" should be combined into one. Two years ago 2 students entered the "Ship electrical equipment and Automation" study programme but they were

transferred to “Electrical equipment and automatics in industry” study programme because due to small number of students this programme did not run.

Nevertheless, the small number of students (8 in the first year and 6 in the second year) point to the rather weak promotion of Study Programme for potential candidates studying in respective BA study programmes (both in the Department and in College) or for undergraduates working in enterprises. Efforts could be consolidated with BA programme teaching staff to attract more school graduates to be enrolled into respective BA programme.

Furthermore, taking to account a poor admission situation in the adjacent “Ship electrical equipment and Automation” MA programme, it seems to be reasonable combining these two programmes into one single modern and attractive Master programme “Electrical Equipment and Automatics in Marine and Coastal Industry” with two sub-specializations “Electrical Equipment and Automatics in industry” and “Ship Electrical Equipment and Automation” could be advantageous.

Since the number of Programme students is considerable determined by the number of state-funded places, the Faculty administration could be more active in promoting the larger number of such places for the Programme. The international publications in the journals with citation index and participation in the international research projects could result in increasing state funded places for the study programme.

Meeting with the stakeholders (Oil terminal, Water supply Company, Kaliningrad Technology University, Electronics Company, Cargo Transportation Company, and Design of electrical equipment company) allows stating that all of them are generally interested in graduates of this study programme and have employed in the past and plan to further employ some of them. Nevertheless, none of the company representatives were aware of the detailed contents of the programme, they were just generally satisfied with the knowledge and skills of the graduates. Employers have proposed topics for the final theses at least once a year. They are willing to accept students for practice, as well. Thus the merger with the ship related programme would be the more advantageous as Klaipeda is still rather closely connected to if not dominated by the marine industry, and several students of this programme indicated their interest in marine related electrical engineering studies, while firmly rejecting a sailor’s profession. It seems the solution of running two programmes in parallel leaves a gap that is not filled by the present programme. By involving the mentioned companies more, this gap could be filled, mainly, by extending the practice opportunities towards these marine related firms, and by involving them more intensively in the project and thesis works. This would however assume a previous merger with the Ship electrical equipment and automation programme. At present, even visits of students to these companies are organized are only rarely, definitely not regularly. Only about 10 % of the final thesis topics are proposed by companies. This number should be further increased in order to achieve more efficient management of the programme.

Due to the small number of students it would be advantageous to attract foreign students. A while ago they had a group of students from Greece; at present they have one student from Belgium and they try to invite students from Kaliningrad and Turkey, according to an Agreement already signed. With better advertisement and participation at international study fairs this effect could be increased.

III. RECOMMENDATIONS

1. Merge the two programmes “Electrical Equipment and Automatics in industry” and “Ship Electrical Equipment and Automation” into one single modern and attractive Master programme ‘Electrical Equipment and Automatics in Marine and Coastal Industry” with two sub-specializations “Electrical Equipment and Automatics in industry” and “Ship Electrical Equipment and Automation”.

2. Intensify the role of marine industry related companies as practice sites and project/thesis proposers in order to adapt to local stakeholders’ needs and character.

3. Work out a clear strategy for the internationalization of studies. Develop a marketing strategy for attracting students on the national level and from abroad. Participate at international study fairs.

4. Encourage students and teaching staff to take part in the Erasmus programme and other international mobilities.

5. The research work and publication activities of teaching staff should be intensified and internationalized. The research activities should be distributed evenly among teaching staff.

6. Organize events and organize marketing activities in order to promote the programme among Bachelor graduates, introduce teaching in English for a larger group of students, not only for a single student.

IV. SUMMARY

Klaipeda is a Lithuanian port city and Klaipeda University is a regional university with the education related to ship building and marine science areas and industry. The Electrical Equipment and Automatics MA study programme provides a lot of local and regional enterprises with specialists of high qualification.

The programme aims and learning outcomes are defined for a general Electrical Engineering programme and do not include specific aims and outcomes for industrial electrical equipment and automatics. Nevertheless, the programme aims and learning outcomes are consistent with those for highly professional Master of Electrical Engineering specialists.

The study aims and outcomes were defined based on the recent regulations for MA degree studies, and the aims and outcomes have been discussed in the department regularly. The staff members, working in the industry, made a number of proposals to that. Professional activities of the majority of the graduates meet the programme providers’ expectations.

The curriculum design meets legal requirements. The Master programme “Industrial Electrical Equipment and Automatics” is well designed and obviously is a programme in accordance with students’ expectations. Detailed information regarding the programme subjects corresponds to the Master level.

The premises for the students at the department are adequate both in their size and quality. New large classrooms in the new building are also available. Some laboratory equipment is old but the laboratories are dynamically improving. New equipment has been purchased to teach modern subjects. Several modern laboratories were established. Reviewers state that teaching materials (textbooks, periodical publications, databases) are adequate and accessible, the library is very good.

The assessment system of students' performance is clear, adequate and publicly available. Evening classes do not raise any problems for students; students are satisfied with matching work and studies in this way.

The study programme is provided by a staff that meets legal requirements. Three fresh PhD holders began working at the department after the defense of their theses. The composition of staff and its qualification is suitable to work successfully in the Master programme to ensure the learning outcomes.

The staff is rather competent for the MA programme. They carry out some research work; have publications in ISI journals with citation index, especially international ones and conference proceedings as well.

Teaching staff should intensify their research and publish more papers in the journals with citation index because that research production allows increasing number of "baskets" and number of entering students.

Nevertheless the teaching staff mobility is not rather good and spread unevenly. Only few of them did take part in Erasmus teaching mobility programme.

The responsibility for decision and monitoring of the implementation of the programme is clearly allocated: study programmes at the University are managed at three levels: Department, Faculty and University. The administration provides teachers with training for monitoring of the programme in the way of interviewing of students, taking into consideration some opinions from industry.

The faculty Study Committee is responsible for innovation and improvement of study programme. The head of department is directly responsible for study programme implementation and administration. Specifically, the role and performance of Study Programme Committee is not seen as evidently as it could be.

Nevertheless there is a big necessity to organize events and organize marketing activities in order to promote the programme among Bachelor graduates, and to introduce teaching in English not for single student, but for student group.

V. GENERAL ASSESSMENT

The study programme *Electrical equipment and automatics in industry* (state code – 621H60002) at Klaipėda University 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)	2
	Total:	**17**

*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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Gražvydas Jakaitis

<...>

V. APIBENDRINAMASIS ĮVERTINIMAS

Klaipėdos universiteto studijų programa *Pramonės elektros įranga ir automatika (valsty*binis kodas – 621H60002) 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	2
	Iš viso:	**17**

* 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

Klaipėda yra Lietuvos uostamiestis, o Klaipėdos universitetas yra regioninis universitetas, kuriame siūlomas išsilavinimas, susijęs su laivų statyba ir jūrų srities mokslais bei pramone. Magistro studijų programoje Pramonės elektros įranga ir automatika daugumai vietinių ir regioninių įmonių rengiami aukštos kvalifikacijos specialistai.

Programos tikslai ir studijų rezultatai nustatyti bendrai Elektros inžinerijos programai ir juose nėra specifinių tikslų bei rezultatų, konkrečiai susijusių su pramonės elektros įrangos ir automatikos programa. Tačiau programos tikslai ir studijų rezultatai yra suderinami su tikslais ir rezultatais, taikomais itin aukštos kvalifikacijos elektros inžinerijos specialistams magistrams.

Studijų tikslai ir rezultatai buvo nustatyti remiantis neseniai išleistais magistro laipsnio studijų reglamentais, o tikslai ir studijų rezultatai yra reguliariai aptariami katedroje. Pramonės srityje dirbantys personalo nariai šiuo klausimu pateikė daug pasiūlymų. Daugumos absolventų profesinė veikla atitinka programos teikėjų lūkesčius.

Programos sandara atitinka teisinius reikalavimus. Magistro programa Pramonės elektros įranga ir automatika yra gerai sumodeliuota ir akivaizdu, kad tai – programa, tenkinanti studentų lūkesčius. Išsami informacija apie programos studijų dalykus atitinka magistro lygio reikalavimus.

Programos studentams teikiamos patalpos yra tinkamos tiek savo dydžiu, tiek kokybe. Taip pat galima naudotis auditorijomis, esančiomis naujajame pastate. Kai kuri laboratorijų įranga yra pasenusi, tačiau laboratorijų kokybė sparčiai gerėja. Moderniems dalykams dėstyti buvo nupirkta

nauja įranga. Buvo įsteigtos kelios modernios laboratorijos. Vertintojai teigia, kad mokomoji medžiaga (vadovėliai, periodiniai leidiniai, duomenų bazės) yra tinkama ir prieinama, biblioteka – aukšto lygio.

Studentų darbo vertinimo sistema yra aiški, adekvati ir viešai prieinama. Vakarinės paskaitos studentams nesudaro jokių problemų, studentai patenkinti tuo, kad tokiu būdu gali suderinti darbą ir studijas.

Studijų programą dėsto personalas, atitinkantis teisinius reikalavimus. Katedroje pradėjo dirbti trys naujai daktaro disertacijas apsigynę ir daktaro laipsnius įgiję asmenys. Personalo struktūra ir jo kvalifikacija yra tinkama sėkmingai dėstyti magistro programą ir studijų rezultatams užtikrinti.

Personalas yra gana kompetentingas magistro programai dėstyti. Jie vykdo tam tikrą mokslinį tiriamąjį darbą, leidžia publikacijas ISI žurnaluose su citatų rodykle, ypač tarptautiniuose, taip pat dalyvauja konferencijose.

Dėstantysis personalas turėtų aktyviau vykdyti mokslinius tyrimus ir leisti daugiau publikacijų žurnaluose su citatų rodykle, nes toks mokslinių tyrimų našumas leistų didinti „krepšelių“ ir stojančiųjų studentų skaičių.

Tačiau dėstančiojo personalo judumo lygis nėra pakankamai geras ir paskirstytas nevienodai. Tik keletas iš jų dalyvavo „Erasmus“ dėstytojų judumo programoje.

Aiškiai paskirstyta atsakomybė už sprendimus ir programos įgyvendinimo stebėseną. Studijų programa universitete valdoma trimis lygiais: katedros, fakulteto ir universiteto lygiu. Administracija rengia dėstytojams mokymo kursus, kuriuose moko stebėti programą apklausiant studentus, atsižvelgiant į kai kurias pramonės bendrovių reiškiamas nuomones.

Fakulteto Studijų komitetas yra atsakingas už studijų programos inovacijas ir tobulinimą. Katedros vedėjas tiesiogiai atsako už studijų programos įgyvendinimą ir administravimą. Tiksliau sakant, Studijų programos komiteto vaidmuo ir veikla nėra tokia akivaizdi, kokia galėtų būti.

Tačiau ypač būtina organizuoti renginius ir rinkodaros veiklą siekiant reklamuoti programą bakalauro studijų studentams ir įvesti dėstymą anglų kalba ne tik vienam studentui, bet studentų grupėms.

III. REKOMENDACIJOS

7. Rekomenduojame sujungti dvi programas: Pramonės elektros įranga ir automatika ir Laivų elektros įranga ir automatika į vieną modernią ir patrauklią magistro programą pavadinimu Jūrų ir pakrantės pramonės elektros įranga ir automatika su dviem šalutinėmis specializacijomis: Pramonės elektros įranga ir automatika bei Laivų elektros įranga ir automatika.

8. Stiprinti jūrų pramonės srityje veikiančių bendrovių vaidmenį programai, pavyzdžiui, jose atliekant praktiką ir vykdant jų siūlomus projektus ar rašant baigiamuosius darbus, tam, kad programą būtų galima labiau pritaikyti socialinių dalininkų poreikiams ir veiklos pobūdžiui.

9. Parengti aiškią studijų internacionalizacijos strategiją. Sudaryti rinkodaros strategiją studentams nacionaliniu lygiu ir iš užsienio pritraukti. Dalyvauti tarptautinėse studijų mugėse.

Studijų kokybės vertinimo centras

10. Skatinti studentus ir dėstantįjį personalą dalyvauti „Erasmus“ programoje ir kitose tarptautinio judumo programose.

11. Reikėtų skatinti dėstantįjį personalą aktyviau vykdyti mokslinius tiriamuosius darbus bei juos atlikti tarptautiniu mastu. Dėstančiojo personalo mokslinių tyrimų veikla turėtų būti paskirstyta tolygiai.

12. Organizuoti renginius ir rinkodaros veiklą siekiant reklamuoti programą bakalauro laipsnį turintiems absolventams, įvesti dėstymą anglų kalba didesnei studentų auditorijai, ne tik vienam studentui.

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