STUDIJŲ KOKYBĖS VERTINIMO CENTRAS
CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

ELECTRONICS ENGINEERING FIELD OF STUDY

at Klaipėda University

EXTERNAL EVALUATION REPORT

Expert panel:

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2. Academic member: Prof. Yevhen Yashchyshyn
3. Academic member: Dr. Olev Märtens
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SKVC coordinator: Gabrielė Čėplaitė

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I. INTRODUCTION

1.1. OUTLINE OF THE EVALUATION PROCESS

The field of study evaluations in Lithuanian higher education institutions (HEIs) are based on the following:

- Procedure for the External Evaluation and Accreditation of Studies, Evaluation Areas and Indicators, approved by the Minister of Education, Science, and Sport;
- Methodology of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (SKVC);
- Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG).

The evaluation is intended to support HEIs in continuous enhancement of their study process and to inform the public about the quality of programmes within the field of study.

The object of the evaluation is all programmes within a specific field of study. A separate assessment is given for each study cycle.

The evaluation process consists of the following main steps: 1) Self-evaluation and production of a self-evaluation report (SER) prepared by an HEI; 2) A site visit by the review panel to the HEI; 3) The external evaluation report (EER) production by the review panel; 4) EER review by the HEI; 5) EER review by the Study Evaluation Committee; 6) Accreditation decision taken by SKVC; 7) Appeal procedure (if initiated by the HEI); 8) Follow-up activities, which include the production of a Progress Report on Recommendations Implementation by the HEI.

The main outcome of the evaluation process is the EER prepared by the review panel. The HEI is forwarded the draft EER for feedback on any factual mistakes. The draft report is then subject to approval by the external Study Evaluation Committee, operating under SKVC. Once approved, the EER serves as the basis for an accreditation decision. If an HEI disagrees with the outcome of the evaluation, it can file an appeal.On the basis of the approved EER, SKVC takes one of the following accreditation decisions:

- **Accreditation granted for 7 years** if all evaluation areas are evaluated as exceptional (5 points), very good (4 points), or good (3 points).
- **Accreditation granted for 3 years** if at least one evaluation area is evaluated as satisfactory (2 points).
- **Not accredited** if at least one evaluation area is evaluated as unsatisfactory (1 point).

If the field of study and cycle were **previously accredited for 3 years**, the re-evaluation of the field of study and cycle is initiated no earlier than after 2 years. After the re-evaluation of the field of study and cycle, SKVC takes one of the following decisions regarding the accreditation of the field of study and cycle:

- To be accredited for the remaining term until the next evaluation of the field of study and cycle, but no longer than 4 years, if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points).
- To not be accredited, if at least one evaluation area is evaluated as satisfactory (2 points) or unsatisfactory (1 point).

1.2. REVIEW PANEL

The review panel was appointed in accordance with the Reviewer Selection Procedure as approved by the Director of SKVC.

The composition of the review panel was as follows:

1. Panel chair: Prof. László T. Kóczy, DSc, Professor at Budapest University of Technology and Economics and Member of the Hungarian Higher Education Accreditation Committee (HAC);
2. Academic member: Prof. Yevhen Yashchyshyn, DSc, Professor at Warsaw University of Technology, deputy Director for Research of Institute of Radioelectronics and Multimedia Technology;
3. Academic member: Dr. Olev Märten, Senior Research Fellow at Tallinn University of Technology;
4. Social partner representative: Šarūnas Venslavas, "Trina Solar (Schweiz) AG“ Utilities Manager for the Baltics;
5. Student representative: Gabija Šliužaitė, Vilnius Gediminas Technical University, 3rd year student of the first-cycle study program "Industrial and Product Design", member of the Lithuanian Students' Union.

1.3. SITE VISIT

The site visit was organised on 25 April, 2025 onsite.

Meetings with the following members of the staff and stakeholders took place during the site visit:

- Senior management and administrative staff of the faculty(ies);
- Team responsible for preparation of the SER;
- Teaching staff;
- Students;
- Alumni and social stakeholders including employers.

There was no need for translation and the meetings were conducted in English.

1.4. BACKGROUND OF THE REVIEW

Overview of the HEI

Klaipėda University (KU) is in the region of Western Lithuania the only university offering 2nd cycle (Master level) studies of Electronics Engineering, while in overall Lithuania also in Vilnius and Kaunas 2-nd cycle EE studies are offered (in Vilnius and Kaunas). The study program at KU combines both electronics and electrical engineering, being unique by this approach.

Some facts about the KU:

1) Klaipėda University (KU) was founded in 1991 by the Supreme Council of the Republic of Lithuania as a multidisciplinary centre of sciences and studies in the Baltic Sea region, integrated into international academic networks;
   KU is located in Lithuania's only seaport Klaipėda city, which is an important transport hub, with land, air, water and rail lines to Scandinavian and other markets;

2) In 2015-2019, the number of faculties was reduced from 7 to 3 and the number of departments was halved. Currently, KU has three (3) faculties:
   - Social Sciences and Humanities,
   - *Marine Technology and Natural Sciences,*
   - Health Sciences,

   and two institutes
   - Baltic Region History and Archaeology,
   - Marine Research.

   The faculties and institutes have 16 departments, 9 research and/or study centres, 2 museums, a fleet of 3 ships and more than 55 laboratories;

   The Faculty of Marine Technology and Natural Sciences (FMTNS) of KU has 3 departments: Engineering, Informatics and Statistics, Marine Engineering. FMTNS offers region relevant 1st, 2nd and 3rd cycle study programmes in engineering study fields of Chemical, *Electrical, Electronics (EE),* Mechanical, Production, Civil, Marine,
   Transport (3rd cycle) and informatics study field.

3) KU has modern infrastructure – eg:
- the research vessel “Mintis” (2016);
- the laboratory of “Autonomous systems and artificial intelligence” (2023);
- Marine Research Institute (MRI, 2018);
- 2023, KU STEAM centre was open and operating in KU main Campus;

4) Vision of the KU: a future-oriented University with internationally recognized achievements in research, studies, and innovations that contribute to the prosperity of the Baltic Sea Region. KU action plan 2023 envisages increasing the number of students, strengthening the graduate monitoring system, specializing in blue growth, integrating SDGs into studies, intensifying R&D activities, increasing internationalization of science, digitalization, strengthening the policy of gender equality, and reducing the carbon footprint of KU campus.

Overview of the study field

The EE study programme in Klaipėda was launched in 1997. Currently, KU implements only one program in the field of EE – Innovative Electrical and Automation Systems.

The study program emphasizes the goal of achieving synergy between science, business, and academic studies. As a result, specialized subjects within the program are taught by experts who possess both theoretical knowledge and practical experience in their respective fields. A portion of the final master theses in EE is done in collaboration with business and industrial entities, where students can choose topics suggested by municipalities and ministries, or they can take part in ongoing scientific initiatives within the DE. Also, the KU Science and Study Promotion Fund helps developing students' additional skills and competitions by supporting creative projects by facilitating the purchase of needed materials and components for research or model production.

Previous external evaluations

The last external evaluation of the IEAS study program was performed by the Study Quality Assessment Centre (*Resolution No. SV6-8, 2021-07-27*) in 2014 and was accredited for 3 years, then the extension of accreditation was carried out by Study Quality Assessment Centre until now.

The suggestions of 2014 evaluation has well taken into account:

1) Two previous MSc study programmes have been merged to one more attractive one;

2) Cooperation with marine industry as practice sites and project/thesis proposers is improved;

3) Internationalization of studies has been improved due to marketing and other activities;

4) Attracting of the students on the national level and from abroad has been significantly improved;

What has also well developed, but still some space for further improvements:

5) Encouraging the students and teaching staff to take part in the Erasmus programme and other possibilities has worked well for the staff. Still by understandable reasons (MSc students are often not so young any more, they have families and everyday jobs) - the students are not very active in the mobility possibilities;

6) The suggestion for research work and publication activities of teaching staff – this has been intensified and internationalized across the whole staff, but there is still space to improve the visibility of the research - there could be more successful competition-based project applications, high level – Q1 and Q2 publications, more patent applications etc.

Documents and information used in the review

The following documents and/or information have been requested/provided by the HEI before or during the site visit:

- *Self-evaluation report and its annexes*
- *Final theses*

Additional sources of information used by the review panel:

Additional available data was used- websites of the University, databases of the publications (eg WoS, Scopus, Google-scholar) and patents (worldwide database of the European Patent Office).

II. STUDY PROGRAMMES IN THE FIELD

Second cycle/LTQF 7

Title of the study programme	**Innovative Electrical and Automation Systems**	
State code	6211EX064	
Type of study (college/university)	University	
Mode of study (full time/part time) and nominal duration (in years)	Full-time, 2 years	
Workload in ECTS	120	
Award (degree and/or professional qualification)	Master of Engineering Science	
Language of instruction	Lithuanian / English	
Admission requirements	Bachelor degree in Engineering, Technology, Mathematics,Informatics or Physical sciences study field	
First registration date	19-05-1997	
Comments (including remarks on joint or interdisciplinary nature of the programme, mode of provision)		

III. ASSESSMENT IN POINTS BY CYCLE AND EVALUATION AREAS

The **second cycle** of the Electronics Engineering field of study is given a **positive** evaluation.

No.	Evaluation Area	Evaluation points[1*]
1.	Study aims, learning outcomes and curriculum	4
2.	Links between scientific (or artistic) research and higher education	4
3.	Student admission and support	4
4.	Teaching and learning, student assessment, and graduate employment	4
5.	Teaching staff	4
6.	Learning facilities and resources	4
7.	Quality assurance and public information	4
	Total:	28

[1] **1 (unsatisfactory)** - the area does not meet the minimum requirements, there are substantial shortcomings that hinder the implementation of the programmes in the field.
2 (satisfactory) - the area meets the minimum requirements, but there are substantial shortcomings that need to be eliminated.
3 (good) - the area is being developed systematically, without any substantial shortcomings.
4 (very good) - the area is evaluated very well in the national context and internationally, without any shortcomings.
5 (exceptional) - the area is evaluated exceptionally well in the national context and internationally.

IV. STUDY FIELD ANALYSIS

AREA 1: STUDY AIMS, LEARNING OUTCOMES AND CURRICULUM

1.1.	Programmes are aligned with the country's economic and societal needs and the strategy of the HEI

FACTUAL SITUATION

1.1.1. Programme aims and learning outcomes are aligned with the needs of the society and/or the labour market

Programme aims and learning outcomes are well aligned with the needs of the society and also with the labour market, as explained below.

The Electronics Engineering (EE) sector is currently dealing with several key challenges: including the need to align skills with Industry 4.0 and the industry's increasing digitization; the demands of the EU Green Deal and the pursuit of zero-emission technologies; an aging workforce; the requirement for highly skilled labour across the EU supply chain; the necessity to respond to evolving industry demands; and the difficulties in attracting talent and women to the sector. This sector is undergoing a transformation that involves digitization and environmentally sustainable practices, needing an adaptation of the technical workforce to new technologies, design methods, manufacturing processes. Employers emphasize the importance of developing adaptable skills to work in a rapidly changing business environment.

Overall need for masters in EE in Lithuania and specifically in the region - is described in documents like "Lithuania's Progress Strategy Lithuania 2030", the "Klaipėda 2030: Economic Development Strategy and Action Plan", the "Smart specialization" etc.

The general policy of Lithuania is creation of a knowledge economy and information society, prioritizing the development of science, technology and innovation, as well as high and value-added technologies with high profit.

Engineers nowadays need a range of knowledge, including mechanics, but also computer science, robotics, mechatronics, programming etc. The demand for engineering professionals, who can use engineering tools and digital technologies, design production technologies, communicate with robots and drones, and use intelligent engineering systems and artificial intelligence applications to modernize industry is growing every year.

As was also well confirmed by meetings with students (who are mostly working already in the field of engineering), staff, company representatives and the alumni. The companies really need highly qualified engineers. Also the students understand the need for highly qualified engineers in the industries and are well motivated to have the Master level qualification.

1.1.1.1 The relevance and uniqueness of the learning outcomes of the field of the study programme and compliance with the needs of the society and the labour market

The learning outcomes of the study programme are relevant, as targeted to prepare highly qualified and skilled EE specialists, needed for the society. The learning outcomes are unique, taking into account the regional aspects of the university - including the types of the companies around and the specific knowledge of the academic staff and interests of the students.

The labour market in the region clearly needs these highly qualified specialists and the graduates are contributing well to the companies, working in significant engineering (and often managing of engineering) jobs.

1.1.2. Programme aims and learning outcomes are aligned with the HEI's mission, goals, and strategy

The aim of the study program is the same as HEI's mission and goal - to prepare highly qualified EE specialists and researchers to meet the needs of the latest knowledge and information-based economy, capable of performing intellectual and creative activities. The goal of the study program is to provide future professionals with a research-based education corresponding to the high level of technology required for the operation of the global engineering market, recognizing the importance of engineering solutions. The program aims to teach to connect engineering solutions with economic and social consequences, environmental impact, to communicate with engineering and the general community and applying innovative methods in solving non-standard and technically uncertain problems.

In 2024, KU's Strategy for increasing the competitiveness of engineering studies and science in 2024-2028 was developed, supporting the HEI's mission and goal, which is aligned with study programme aim.

So the aims and learning outcomes of the study program are well aligned with the HEI's mission, goals, and also strategy.
This was also well confirmed during the meetings with students (who are mostly working already in the field of engineering), staff, company representatives (social partners) and the alumni. Programme aims and learning outcomes are well aligned with the needs of the companies.

Graduates are well prepared to take the jobs with high technical and other responsibilities, even to acquire fast new skills and knowledge and are ready for independent work. Teaching is carried out in both Lithuanian and English languages, according to the need separately or together to some extent. Also the programme aims and learning outcomes are well connected to the HEI's mission, to provide the region with highly qualified engineers.

One outcome of the study program is that the graduates are ready to continue studies on the 3-rd level of studies, acquiring the PhD degree.

Also, what is really good - students are encouraged to participate at national and international scientific events, helping and motivating the students to achieve the study outcomes.

ANALYSIS AND CONCLUSION (regarding 1.1.)

The study program is well aligned with the economic and societal needs of the country and specifically of the region of Klaipėda. Also the program is well aligned with the strategy of the HEI and the needs of the labour market. Graduates of the study program are able to work as highly qualified specialists, engineers and managers in various types of business, industrial or public sector organizations.

1.2.	Programmes comply with legal requirements, while curriculum design, curriculum, teaching/learning and assessment methods enable students to achieve study aims and learning outcomes

FACTUAL SITUATION

1.2.1. Programmes comply with legal requirements

By observations of the Evaluation Panel the study program under evaluation complies with legal requirements of the Lithuania (incl the LAW ON HIGHER EDUCATION AND RESEARCH of the REPUBLIC OF LITHUANIA, 30 April 2009 No XI-242), requirements of the University itself and with good European practices. More specifically - the study program corresponds to the following documents:

- Law on Science and Studies of the Republic of Lithuania. (No. XI-242 of 30 April 2009; Consolidated Version 2023-06-07);

- Orders of the Minister of Education and Science of the Republic of Lithuania: 1) General study requirements. (Order No. V-1168 of 30 December 2016, Consolidated Version 2023-09-01); 2) Description of the group of engineering study fields. (2015 September 10 Order. No. V-964). The new order was issued on July 5, 2023, No. V-948, but the IEAS program was adapted to them by 2023 autumn, to be valid from the 1st of September of 2024.
- According to the resolutions of the Government of the Republic of Lithuania: 1) Regarding the approval of the list of study fields and groups of fields according to which studies are conducted in higher education institutions, the procedure for its amendment, and the structure of qualification degrees and the principles of compiling the names of study programs. 2016 December 1 No. V-1075; 2) regarding the approval of classifications of scientific fields and artistic fields. (2019 February 6 No. V-93);
- KU internal documents: 1) Statute of KU (Resolution of the Senate of KU of 1 June 2012, No. 11 - 58; approved by Resolution of the Seimas of 17 October 2012 No. XI-2308); 2) Resolution on the study regulations of KU (Resolution of the KU Senate No. 11-10 of 15 November 2018).

1.2.1.2. The compliance of the study programme aims, intended learning outcomes, curriculum design, subjects and/or modules with the type, cycle and academic and/or professional requirements of studies, and the sufficiency of the study programme to ensure learning outcomes are substantiated.

This Master programme is a 2-year programme in the field of the EE.Studies are carried out in the full-time daily form.

The intended learning outcomes and content of the study programme corresponds well the study level, to the field, but also to the expectations of the students and the companies. The organization and the content of the study programme is sufficient to achieve the learning outcomes.

1.2.1.3. The principles of composition of study credits (based on learning outcomes, student workload or otherwise, periodicity of review, etc.).

In 2021 the study programme was revised and the amount of credit points was increased from 90 ECTS to 120 ECTS credits, for additional semesters and additional ECTS for subject and scientific research projects.

The study credits correspond to the European credit transfer and accumulation system ECTS, which is student-oriented. The number of credits for a study subject is estimated, taking into account how long it takes an average student to achieve the study results of the subject at a typical level of achievement. The principles of compiling study credits are defined in Chapter XI of the KU Study Regulations (2018). It provides recommended classroom and self-study work hours for study subjects of various scopes at all study levels. The minimum volume of the study subject in the second cycle studies is 6 study credits.

Normally, study subjects are certified every 3 years, but can be submitted for attestation and more often, depending on the comments of lecturers, students or the needs expressed by the social partners. In addition, in October-November, the study programs and study subjects of the next study year are reviewed and discussed, evaluating the information accumulated during the year.

In conclusion - the study program complies with legal requirements.

1.2.2. Programme aims, learning outcomes, teaching/learning and assessment methods are aligned

The programme aims, learning outcomes, teaching and learning and assessment methods are well aligned. The teaching and learning approaches are clear to all sides, also the assessment. As both – the staff and the students are well motivated and the staff is very supportive, so the overall learning and studying process is smooth.

In the study program, various teaching and learning methods are utilized. These methods include lectures, exercises, laboratory work, individual consultations, presentations, seminars (conducted in small groups) and individual or team projects. Additionally, distance learning is facilitated through a

virtual learning environment, and other approaches such as study tours, case studies, written assignments, research and summarization of essential information, reading books and articles, and preparing and delivering oral presentations are integrated into the curriculum to provide a comprehensive and interactive learning experience for students in the program.

An important part of the study process, helping to achieve the learning outcomes and overall aims of the program is the students' work on their final master thesis (FMT), starting from the very beginning of the Master studies.

1.2.3. Curriculum ensures consistent development of student competences

The study program is designed on the following principles: the first three semesters teach deepening subjects related to research conducting and planning, modelling of systems, including AI usage, diagnostics, electromagnetic fields, green design and production. During the 2nd and 3rd semesters, there are possibilities to choose two subjects. Students can choose the subject from the extensive list of the study subjects spanning from robotics, advanced control system, or artificial vision, to electronics modelling, IoT, energy flow analysis, or even innovation strategies.

Curriculum ensures consistent development of student competences by classroom studies, working on the Thesis projects and other ways, including the participation of the students on scientific events.

An important part in the development of student competences is their work on Final master thesis, as described in the part 1.2.5

Also combining various teaching/learning methods helps to ensure the consistent development of student competences - like lectures, exercises, laboratory work, individual consultations, presentations, seminars (conducted in small groups) and individual or team projects. Also distance learning, virtual learning environment, study tours, case studies, written assignments, research and summarization of essential information, reading books and articles, and preparing and delivering oral presentations are integrated into the curriculum to provide consistent development of student competences.

1.2.4. Opportunities for students to personalise curriculum according to their personal learning goals and intended learning outcomes are ensured

There is a wide range of possibilities for students to study according to individual study schedules. The possibility for students to individualize their studies is regulated by the Regulations of Studies of KU (2018 version), the Rector's Orders On the Description of the Procedure for the Examination Session of the Autumn/Spring Semester of the 20XX-20XX Academic Year of KU and other internal documents (e.g., FMTNS, DE). The documents provide for the possibility of individualisation of students' studies:

a) Individual plan - a list of EE study field elective subjects that student shall have the possibility to choose from the list of subjects offered in semesters 2 to 3 of the Master's programme;
b) For students studying concurrently on a second-degree programme or pursuing a second higher education diploma, an individual short-course study plan is available;
c) The possibility of bringing forward/postponing the time of the exam session/final thesis defence is provided by the KU Study Regulations;
d) Students have the possibility to go to other higher education institutions through exchange programmes (e.g. for the duration of the full course of study, students can go for a 12-month period to study and/or do a traineeship under the Erasmus+ programme). Students have the possibility to do a voluntary practice or internship that is not part of their study programme;
e) Opportunity to study independently, free to attend classes. Students who are unable to attend classes, with the consent of the subject lecturer, may obtain permission from the FMTNS Dean to attend classes freely;
f) Students have the opportunity to attend more subjects than provided in the study plan for an additional fee.

As it was seen during the site visit of the Evaluation Panel, the students and the staff are well motivated to support the students not only in classrooms, but also individually, in labs, in working on final thesis and other projects and other ways (including in preparing with students the scientific conference or journal papers). All this greatly supports individual /personal development of the student.

1.2.5. Final theses (applied projects) comply with the requirements for the field and cycle

The Final theses (applied projects) research is divided in 4 semesters – first semester student with the supervisor determines the aim and tasks for the FMT by analysing the scientific literature and scientific papers resulting the first semester scientific project report; in the second semester – the analytical part of scientific work is done by modelling or analytical approach in the topic of FMT and the report is created analysing the modelling results or results of analytical calculations; during the third semester the experimental part of scientific work is done in the FMT topic direction selecting the experiment scope, equipment, setting and conducting the experimental work in the lab and after drawing the results there is also a possibility work on virtual experiment with extensive modelling using statistical simulations as a replacement for real experiment; in the fourth semester the FMT is prepared making a conclusions of the all the works which was done during previous semesters.

Final theses (which are often applied projects) comply with the requirements for the field and the cycle. As a positive observation - students preparing their FMT have the opportunity to consult not only with their thesis supervisor but also with other academic staff. Also, high quality of the Thesis is supported by the approach, where the students choose their FMT topics already within the first weeks of the 1-st semester.

During the site visit the high level of the FMT works was observed. The works include comprehensive engineering, sophisticated analysis and calculations.

1.2.5.2. Final theses commissioned by the social partners of the HEI (if any)

In the KU there is a clear recommendation to invite representatives of other research and study institutions, social partners, and professional practitioners to the commissions. Also the topics of the Thesis are often coming from the companies. Also typically all students of the study programme are already working in the companies, making further connections to the companies and social partners.

1.2.5.3. The conformity of the content of the final theses to the field studies

Final theses topics are well aligned to the study field. This is starting with the selection of the topic in the very first semester and going through all the study period, under the supervision of the professional EE staff. High quality of the final thesis and clear connection to the study field was also observed during the site visit.

ANALYSIS AND CONCLUSION (regarding 1.2.)

Programmes comply with legal requirements, while curriculum design, content of the curriculum, teaching and learning and assessment methods enable students to achieve study aims and learning outcomes. Really good is the system with work on final thesis topics, going through the all study program time. KU continuously monitors the compliance of study programs with the changing requirements and needs of the labour market.

AREA 1: CONCLUSIONS

AREA 1	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements,	Good - 3 Meets the requirements, but there are	Very good - 4 Very well nationally and	Exceptional - 5 Exceptionally well nationally

		but there are substantial shortcomings to be eliminated	shortcomings to be eliminated	internationally without any shortcomings	and internationally without any shortcomings
Second cycle				X	

COMMENDATIONS

1. The process of the preparation of the Master Thesis is efficient and the Thesis are of high quality.
2. It is very good that students do advanced calculations and analysis in their final theses.

RECOMMENDATIONS

For further improvement

1. Probably more involvement of social partners might be good for study program content discussions. Eg social partners could be interested to include more studies about non-technical issues- like project, production and quality management.

AREA 2: LINKS BETWEEN SCIENTIFIC (OR ARTISTIC) RESEARCH AND HIGHER EDUCATION

2.1.	Higher education integrates the latest developments in scientific (or artistic) research and technology and enables students to develop skills for scientific (or artistic) research

FACTUAL SITUATION

2.1.1. Research within the field of study is at a sufficient level

2.1.1.1. Results of the last 3 years of the annual evaluation of HEIs' R&D and art activities and results of the last comparative expert evaluation of R&D activities of universities

During the 2023 comparative expert evaluation of KU research and experimental development (R&D) activities (period 2018-2022), the KU Technology Science Assessment Unit was assessed. This Unit included the group of research fields within the research area - Engineering fields of Electrical and Electronics, Mechanical and Civil. The experts noted that "the group of research fields, it can be concluded that the performance of R&D activities is of high level and recognized both locally and nationally", but "it will be essential to invest additional effort in publishing in more distinguished international journals, participating in more relevant conferences, and encouraging more extensive international mobility of researchers while simultaneously attracting foreign experts to work at the UoA". Some of the scientific reports of EE scientists were carried out within the EU, and the R&D results themselves of the whole group were assessed and evaluated "3", in comparison in 2018 a separate Electrical and Electronics Engineering field evaluation from science quality part was "2". Evaluation of R&D was mentioned as "low funds" during the period and project activities was complicated due to the large number of multidisciplinary projects where they had to be assigned to one area, such as a significant national project.

In the previous evaluation, the experts noted that "*the group of research fields, it can be concluded that the performance of R&D activities is of high level and recognized both locally and nationally"*, but "*it will be essential to invest additional effort in publishing in more distinguished international journals, participating in more relevant conferences, and encouraging more extensive international mobility of researchers while simultaneously attracting foreign experts*":

2.1.1.2. Which research, applied science and art activities carried out by the HEI are directly related to the field studies carried out and how they are integrated in the studies.

The content of the study program correlates well with the research carried out in this field: digital ports, control systems, digital technologies, artificial intelligence, etc. Examples of such projects are Horizon Europe project "Thermochemical Heat Recovery and Upgrade for Industrial Processes (TechUPGRADE)", 2023-2027, HORIZON-CL5-2022-D4-01-04, INTERREG South Baltic. ELMAR-Supporting South Baltic SMEs to enter the international supply chains & sales markets for boats & ships with electric propulsion's 2017-2021 and No. 01.2.2-LMT- K-718-01-0081 "Future Autonomous Green Port: Development of a New Container Handling Method and System Prototype" 2017-12 till 2021-12. Cooperation with JSC "Klaipėdos Smeltė".

In the study program, lecturers update students' education by sharing their project experience, enhancing learning materials, and encouraging student participation or continuation in research.

2.1.1.3. The cooperation of the HEI with external partners in carrying out scientific (applied science, art) activities in the field of science/art related to the study field

The cooperation of the HEI with external partners in applied research is organized well and has several aspects. For example, final thesis topics are often proposed by the companies. Also, joint projects take place, e.g. *No. 01.2.2-LMT- K-718-01-0081 "Future Autonomous Green Port:*

Development of a New Container Handling Method and System Prototype" 2017-12 till 2021-12. Cooperation with JSC "Klaipėdos Smeltė"

2.1.1.4. Plans for scientific (applied science, art) activities in the science/art field related to the study field are provided and their financial viability is presented

There are clear plans and opportunities for the R&D activities, related to the study programme. The following projects are used to upgrade KU scientific infrastructure, improve research management, including the development of the information base, commercialise of research results, and fund research:
- "Strengthening the international competitiveness of Klaipeda University in the EU-CONEXUS network of European universities" with a budget of 1,88 MEUR,
- The project "Increasing the commercialization potential of R&D results in the Maritime Valley" (EU and state funding – 699,76 kEur) was implemented in 2018-2021, was continued in 2021-2023 as KORPIS2:
- The university has established a postdoc program, which started in 2022. The program allows doctoral degree level scientists to come for two years.
- The funds for scientific research could be allocated also from Klaipeda Future fund to invite foreign researchers from abroad for short-term visits, the KU Science and Study supports lecturer who make projects applications and all academic staff regarding the publishing of articles in CA WoS in Q1, Q2 and Q3.
- The other scientific funding source is project applications.

As overall - what was noticed by the current Evaluation Panel, after meeting with the staff, looking at available documents, but also to public databases (Scopus, WoS, Google Scholar, also the worldwide patent databases) fully confirm the previous observations and suggestions. While the research of the academic staff is on the reasonable (also internationally) academic level, including the quantity and quality of the research papers and R&D projects - there is still room for improvement (citations in international databases, participation in flagship conferences in the field, publications in Q1 and Q2 journals etc). In numbers, currently 2-4 Q1/Q2 papers are published. Also, there could be more international projects. Still, as a good sign, is participation in a H2020 project.

Also, as suggested, the citation indexes of the leading academic staff could be (Scopus, WoS, Google Scholar) instead of 5-6 - more, at least by value of 2, but this will take some time of course.

2.1.2. Curriculum is linked to the latest developments in science, art, and technology

The link between the study program and latest developments in science, art, and technology is mostly carried out by the staff, working in parallel in teaching and in the research. The second link is through the final master thesis (FMT), which is typically guided by academic staff independent applied research lasting over all 4 semesters of studies. Thirdly, the students participate and present their works on various inhouse and external events, seminars and conferences.

Overall, the link between the study program and latest developments in science, art, and technology is really good.

2.1.3. Opportunities for students to engage in research are consistent with the cycle

The opportunities for students to be engaged in the research are really very good and consistent with the cycle and the field of studies.

All students are involved in the R&D topics by working on the topic of the Final Master Thesis, starting in the very first weeks of the studies. Also students can participate in various scientific events with their creative work - in scientific, young scientific and scientific-practical conferences both in Lithuania and abroad. An annual conference "Marine and Coastal Research" is a good venue, where together with lecturers students can present scientific or applied research.

Also, in 2021-2022 4 students participated in the R&D projects- "Future Autonomous Green Port: Development of a New Container Handling Method and System Prototype" , "Creating a Go Kart prototype" and in the internship in R&D at JSC "Vejo projektai".

The academic staff is supportive to help the students to work on their own projects under interest, helping to extend and deepen the knowledge the students get in the classrooms and labs.

ANALYSIS AND CONCLUSION (regarding 2.1.)

Overall, the link between the study program and latest developments in science is really nice and working well. Still, improvements could be possible:

a) Publication- and other international scientific level of academic staff could be improved;
b) More involvement in students to local and international R&D projects, additionally to the final thesis activities.

AREA 2: CONCLUSIONS

AREA 2	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Second cycle				X	

COMMENDATIONS

1. The academic staff has some good local and international R&D projects and high level (Q1, Q2) papers;
2. Good practice with students' final thesis and other student projects.

RECOMMENDATIONS

For further improvement

1. To increase the international visibility of the academic staff;
2. To have more international R&D projects.

AREA 3: STUDENT ADMISSION AND SUPPORT

3.1.	Student selection and admission is in line with the learning outcomes

FACTUAL SITUATION

3.1.1. Student selection and admission criteria and procedures are adequate and transparent

For students there is a clear starting point on the web, making the entering to the study program easy and simple:
https://www.ku.lt/en/masters-degree/fall-intake-1/innovative-electrical-and-automation-systems

Also during the meetings with current students and the alumni it was confirmed that all students (both local as well as international) are very satisfied with the existing admission system.

Also the university is making reasonable marketing activities to find international students, such as preparing easily findable information on the web-site of the university, participating in the student recruitment events, also internationally.

The University is now taking in a lot of students from the College graduates, not only the University BSc-s. And clear and efficient rules are applied in this case, where the College graduates with higher grades (or having already research publications - what is adding additional points to the grades) - can start MSc studies directly, while other College graduates could need additional studies before actually starting the MSc studies.

3.1.1.1. The requirements for admission to the programme, the procedure for awarding additional points

The competitive score of at least 6 is needed for admission for second cycle master studies.

Specifically, as in 2024 - the competitive score for applying for second-cycle degree studies, is calculated according to the formula KB=Vx0.6+Bx0.4+PB, where KB - competitive score, V - subjects of the supplement (appendix) of the diploma of first cycle studies grade-weighted average, B – final paper and/or final exam(s) rating, PB - extra points

The requirements for admission are clearly indicated on the web-site and in formal documents. And this clearness is also confirmed by the students and the staff. Specific aspects here are the adding of additional points for publications during the intake procedure and differentiation of College graduates to start directly the Master studies or with need of additional preliminary study year.

3.1.1.4. The lowest, highest, and average admission scores of the admitted students over the last 3 years

The lowest/highest/average admission scores in the years 2021 to 2024 (there was no intake in 2022) were 6,7 /9,5 /8,5 of maximum 10. The intake, including the admission rules and thresholds are annually analyzed and the calculation rules of the competitive score could be adjusted, for the next year.

In conclusion, the student selection and admission criteria and procedures are adequate and transparent, for both - local and international students.

3.1.2. Recognition of foreign qualifications, periods of study, and prior learning (established provisions and procedures)

The procedure for crediting study results at other higher education institutions is approved by the University Senate (Resolution on approval of the description of the procedure for crediting partial study results at KU. November 19, 2020 No. 11-11), the crediting procedure is described in the KU

study regulations (2018 edition). At the KU, the results of studies, including partial ones, at a higher education institution of a foreign country are credited, if the institution is recognised by the laws of that country. The head of the department oversees the study program and decides on crediting the study results in other higher education institutions. The decision to credit study results is approved by the Dean. The special credit form for results of studies in other higher education institutions at KU is filled.

3.1.2.2. Data of the last 3 years on accredited and non-accredited cases of recognition of results and the reasons for non-accreditation are provided

During the site visit and meetings with the students and alumni - about recognition of foreign qualifications, periods of study, and prior learning (established provisions and procedures) – no problems or complaints were noticed. As a fact, additionally to local graduates (university BSc-s or college-level professional BSc-s) also international students (including from third countries) have found the way to the MSc studies without any obstacles.

ANALYSIS AND CONCLUSION (regarding 3.1.)

As overall, the student selection and admission criteria and procedures are adequate and transparent for both - local and international students. And students seem to be really happy, how it all works. Also specific aspects are well covered - the intake of the College graduates, beside the university bachelors, adding additional points for the publications. The intake works well for both local and international students.

3.2.	There is an effective student support system enabling students to maximise their learning progress

FACTUAL SITUATION

3.2.1. Opportunities for student academic mobility are ensured

Currently KU has 216 Erasmus+ cooperation agreements for various (including the EE) fields . Students, lecturers and non-academic staff are invited to learn about mobility opportunities in informative seminars in English and Lithuanian, where Erasmus+ specialists explain Erasmus+ opportunities, rules and requirements. Also, students who have already participated in the Erasmus+ program are invited to share their impressions at the seminars. All information is available on the KU website.

In order to ensure the mobility of students between countries and to recognize their results obtained abroad and periods of study abroad, KU applies the European Credit Transfer System (ECTS). Upon successful completion of partial studies and submission of an academic certificate (Transcript of Records), the subjects of partial studies are recognized and transferred to the student's study plan in the KU Academic Information System, and upon graduation - to the Diploma Supplement. Names of credits are written in the Diploma Supplement in English and Lithuanian, and the country where the credits were earned is indicated.

Departments also inform students of their programs directly about the competition in various ways. Students, lecturers and non-academic staff are invited to learn about mobility opportunities in informative seminars in English and Lithuanian, where Erasmus+ specialists explain Erasmus+ opportunities, rules and requirements. Also, students who have already participated in the Erasmus+ program are invited to share their impressions at the seminars. All information is available on the KU website. Erasmus+ selection contests for studies and internships are announced twice a year

Overall, there are good and clear academic mobility possibilities, mostly in the form of the Erasmus+ opportunities. Still, also to mention, in reality students often have their internal obstacles to use mobility options – established families, working places and other obligations. On the other side, students are well informed about the mobility options.

3.2.2. Academic, financial, social, psychological, and personal support provided to students is relevant, adequate, and effective

One of the most important forms of support is academic support. At KU academic support is provided to students both in each academic department separately and centrally. Students are offered consultations on all study-related issues (for example, related to the admission process, choice of study program, financial aid, suspension of studies, termination, individual study plan, change of study program, internships or informal activities). For the convenience of students, academic consultants also provide consultations in each academic department of the KU. Also, students of study programs are advised by the head of the department and/or program supervisor, and lecturers.

All KU students have the opportunity to receive an incentive, social or one-time scholarship. There are three types of KU incentive scholarships: the Senate Scholarship, FMTNS Council Scholarship and the Incentive Scholarship (for the learning outcomes). From the IEAS program during the 2021-2024 period, students received 7 times Incentive Scholarship. One-time scholarships are awarded for participation in students' research activities (publications, conference reports, participation in research projects and participation in student research societies), also for participation in artistic activities (concerts, winners of competitions) and in sports activities (representation of sports club teams, winners of national and international competitions), also in addition for participation in KU social activities or even in the event of an unexpected temporary financial difficulties. Social scholarships can be obtained both at state-funded and self-paid places. Students wishing to receive this must meet at least one of the following criteria: a) they are from poor families or individuals living alone, who have the right to receive or are receiving social allowance.

KU provides psychological counselling and spiritual care services for both students and other members of the KU community. Individual psychological consultations are provided by a KU psychologist by pre-registration. Spiritual counselling is conducted by the academic chaplain. In 2022, KU organized large-scale training for lecturers and study staff “Student health: challenges to the learning process and ways to solve them”, in which 44 KU employees raised their qualifications. In the same year, KU’s Social Inclusion Strategy and Plan for 2023-2024 were being prepared.

Personal support for students is provided through KUSS, which unites KU students and represents their interests, through dormitory student self-governments operating in student dormitories, which help solve problems arising for students related to living in a dormitory. Students have the opportunity to live in KU dormitories, use the services of catering establishments operating at the KU and participate in the activities of science, art, active leisure groups and sports clubs. KU encourages the participation of students in scientific conferences, seminars, other scientific, cultural, sports events and in order to achieve the KU’s representation, cooperation and the implementation of other activities in line with the KU's strategies, it may compensate the expenses incurred or a part of them.

In conclusion, the academic, financial, social, psychological, and personal support provided to students is working well and no complaints were noticed. Still to mention, about half of the local students and all international students are paying by themselves for studies, which puts a significant financial load on the students.

3.2.3. Higher education information and student counselling are sufficient

Students are offered consultations on all study and higher education related issues (for example, related to the admission process, choice of study program, financial aid, suspension of studies, termination, individual study plan, change of study program, internships or informal activities). For the convenience of students, academic consultants also provide consultations in each academic department of the KU. Also, students of study programs are advised by the head of the department and/or program supervisor, and lecturers. Also, the KU administration staff provide consultations to students on various academic and study organization matters.

So, higher education information and student counselling and support are sufficient, as also confirmed by both- local and international- students.

ANALYSIS AND CONCLUSION (regarding 3.2.)

In conclusion, there is an effective student support system enabling students to maximise their learning progress, including the scholarship systems, counselling and psychological support, and personal study plan opportunities.

AREA 3: CONCLUSIONS

AREA 3	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Second cycle				X	

COMMENDATIONS

1. Admission system is clear and easy to find;
2. Students are well supported by the motivated staff.

RECOMMENDATIONS

For further improvement

1. Suggestion to work further continuously to find both more local and international students in the nearest future.

AREA 4: TEACHING AND LEARNING, STUDENT ASSESSMENT, AND GRADUATE EMPLOYMENT

4.1.	Students are prepared for independent professional activity

FACTUAL SITUATION

4.1.1. Teaching and learning address the needs of students and enable them to achieve intended learning outcomes

4.1.1.1. Study forms and methods, teaching/learning methods, performance assessment methods

Studies in the field of EE are carried out in full-time form. The forms of full-time has an evening schedule, were lectures are held from 17.00 until 20.10, as the majority of students are working. Full-time studies now performed in schedule when students go to lectures on daily basis, the exam sessions are at the same time as for full-time normal schedule students.The study programme was in 2021 revised and duration was increased from 90 ECTS to 120 ECTS credits, to have more time for preparation of FMT, with additional semester of subject and scientific research project.

In the study programme, various teaching and learning methods are utilized. These methods include lectures, exercises, laboratory work, individual consultations, presentations, seminars (conducted in small groups) and individual or team projects. Additionally, distance learning is facilitated through a virtual learning environment, and other approaches such as study tours, case studies, written assignments, research and summarization of essential information, reading books and articles, and preparing and delivering oral presentations are integrated into the curriculum to provide a comprehensive and interactive learning experience for students in the program.

Performance of the students is assessed in traditional ways, by examinations, but also everyday feedback to assignments, tests, labs etc.

4.1.1.2. Students' individual work and evaluation

At least half (in time) of the learning by students is done by individual learning. Among other assignments individual and team-wise projects are done.

4.1.1.3. Further opportunities for studies

Additionally to everyday classes - distance learning is facilitated through a virtual learning environment, and other approaches are used - such as study tours, case studies, written assignments, research and summarization of essential information, reading books and articles, and preparing and delivering oral presentations are integrated into the curriculum to provide a comprehensive and interactive learning experience for students in the program.

4.1.2. Access to higher education for socially vulnerable groups and students with individual needs is ensured.

In KU students with mobility, visual or hearing impairments can study. Students with special needs are given remote consultations using modern video tools, their educational materials are placed in a virtual environment. The new buildings of the KU campus are adapted for people with mobility and visual impairments, as all the mentioned buildings are equipped with elevators and toilets for people with special mobility needs. All new buildings are equipped with surveillance cameras to provide help quickly. The website of KU has a special version of the website for people with poor eyesight. The Library is also adapted to socially vulnerable groups In the case of teaching in older buildings, practical work or theoretical replacements can be moved to the ground floor by scheduling. It should be mentioned also, that no students with disabilities have enrolled into the study programme in last evaluation of the master study program

So, no problems about the needs of socially vulnerable groups were noticed. Also, while discussing with students, no real or possible problems were mentioned.

ANALYSIS AND CONCLUSION (regarding 4.1.)

Teaching and learning addresses the needs of students well and enable them to achieve intended learning outcomes. The achievement of the intended learning outcomes is supported by motivated and helpful teaching staff, facilities (labs, libraries). Access to higher education for socially vulnerable groups and students with individual needs is ensured. So students are well prepared for independent professional activity.

4.2.	There is an effective and transparent system for student assessment, progress monitoring, and assuring academic integrity

FACTUAL SITUATION

4.2.1. Monitoring of learning progress and feedback to students to promote self-assessment and learning progress planning is systematic

The KU monitors the progress of students' studies at several levels: subject, course, study programme. The procedure for surveys of KU students, listeners, graduates, regarding study programs, teaching of study subjects, organization of the study process, quality of assessment of student competencies, organization of these surveys, data analysis, availability, use and publicity is determined by the description of the procedure for organizing study feedback according to the rector's order of November 20, 2019 No. 1-041 “Description of the procedure for organizing study feedback at Klaipėda University”.

At the individual subject level, student performance is evaluated by the respective subject lecturer(s). When employing a cumulative assessment approach for a given subject, the lecturer not only assesses completed assignments but also offers feedback on the student's progress and provides guidance on areas that require attention. Additionally, the lecturer considers student feedback on the assessment methods used in the subject and, based on an evaluation of student performance at the end of the semester, may make improvements to the teaching and assessment methods or adjust the assessment criteria for the subject. Using the Moodle learning platform allows for continuous monitoring of each student's progress by recording ongoing assessments of their classroom and homework assignments. This approach also facilitates providing individualized written feedback to each student. Given the small size of student groups, lecturers have a strong understanding of each student's capabilities and frequently tailor assignments to suit individual needs. The tasks for master students are partly related to the FMT topic.

Students' progress at the course level is monitored by the staff responsible for study administration. When ranking the best students and performing student rotation, it is observed whether the achievement averages of the students studying in the courses of the study programs are not exclusively at the excellent or threshold level. Once recurring trends in student assessment are identified, the results of student achievement are discussed with the administration of DE conducting IEAS studies and the SFC. Students who fail at least one exam during the exam session and are preparing for a retake session receive informational individual letters with information about the exams retake possibilities, various training sessions, and preparation advice for exam retake.

At the level of the EE master degree program, the Department monitors student progress, at least twice per year, but also during their scientific research projects, analyse the feedback from supervisors; evaluate the results of the FMT defence and on-time defended FMT. According to the data, the process of preparing and defending FMT is improved; the distribution of the final achievements included in the plans of subjects is evaluated; the number of students enrolled in the study programme and the numbers and reasons of students’ dropout or suspension of studies are

assessed. In 2021-2024, examination results have been improving due to an increase in the competition score and attention from the lecturers in small groups.

Among other things, the examination results are discussed with students during designated times. According to the KU study regulations (2018), a student who fails an exam has the right to retake it once for free and to retake it a second time upon paying the fee for the credits.
So monitoring of learning progress and feedback to students is given through the all study process by corresponding teachers and department representatives. If needed, individual support is given to students, as well as for everyday teaching and learning, but even in support of the hobby projects of the students', also extending the skills and knowledge of the students. Also to mention, the students seem to be really happy with the overall organization of studies, in all aspects.

4.2.2. Graduate employability and career are monitored

The study program graduates have typically high-qualification employment. Most of the students work during the studies and after completion can get a promotion or work with the same highly skilled work and therefore the employment is equal or close to 100%. This is confirmed by surveys of the University, as well as the information is acquired from the meetings with the students, alumni and social partners. Also the opinion of the students, alumni and social partners is used as a feedback to assess and improve the study programme in all aspects (content of the programme, organization of studies etc).

Also the students themselves are aware about their career opportunities, as they often pay by themselves for their studies quite a reasonable amount of money.

4.2.3. Policies to ensure academic integrity, tolerance, and non-discrimination are implemented

The principles and measures to ensure academic integrity, tolerance and non-discrimination defined in the KU academic ethics code (the KU Academic Ethics Code was approved on June 19, 2015 No. 11-55, changes by the KU Senate Resolution No. 11-2 of October 3, 2019).

The lecturer's relationship with students is based on the principles of academic cooperation and transparency. Being bound by non-academic commitments can lead to a conflict of interest, so ambiguous relationships with students should be avoided. The assessment of the student's knowledge, abilities and skills must be fair, honest and impartial and aligned with the objectives of the course. Basic requirements for lecturers in order to ensure transparency of studies: a) the lecturer must respond in a principled way and report to the ethics committee about cases of student dishonesty, such as plagiarism, copying, buying a written work and submitting it for evaluation by a member of the academic community, etc.; b) the lecturer must reduce the opportunities for students' academic dishonesty to appear during the settlement process; c) the lecturer must not demand personal data from the student or lecturer in group discussions, except in the cases provided for in the Law on Legal Protection of Personal Data of the Republic of Lithuania; d) the lecturer must protect the student's personal data in accordance with the procedure established by the Law on Legal Protection of Personal Data of the Republic of Lithuania; e) the lecturer must avoid linking the student's knowledge assessments with the student's participation (non-participation) in political or social activities etc.

During the visit and meetings with the students, staff, alumni, social partners- no ethical, even hypothetical, problems were noticed. Also no negative comments were heard from the students, as well as from the international students from the third countries. not from the local students.

4.2.4. Procedures for submitting and processing appeals and complaints are effective

The right of students to appeal regarding the assessment of study results is defined in the study regulations of KU in 2018. In the chapter "appeal procedure". Student appeals are accepted:

regarding course work (project) assessment; due to illegal refusal to defend the FMT and/or take the final exam; due to the violation of the procedure for the defence of the thesis (project); due to violations of academic ethics norms during the defence.

Due to possible ethical violations, the student can apply to the KU academic ethics committee.

During the visit and meetings with the students, staff, alumni, social partners- no ethics-related problems were noticed, also in submitting and processing appeals and complaints. All necessary procedures are available, as defined in the study regulations of KU (2018 edition). No negative comments were heard from the students, from the international ones from the third countries. not from the local students, in this aspect.

ANALYSIS AND CONCLUSION (regarding 4.2.)

As overall, no problems about student assessment, progress monitoring, and assuring academic integrity – were found. The system for this is well established and processes are under periodic monitoring and if needed, can be further improved. So everything works well in this part. This was also confirmed by all parties during the Evaluation meetings in the University.

AREA 4: CONCLUSIONS

AREA 4	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Second cycle				X	

COMMENDATIONS

1. Study forms and methods are efficient.

AREA 5: TEACHING STAFF

5.1.	Teaching staff is adequate to achieve learning outcomes

FACTUAL SITUATION

5.1.1. The number, qualification, and competence (scientific, didactic, professional) of teaching staff is sufficient to achieve learning outcomes

The Study program teaching staff – about 1/3 are professors, 1/3 associate professors, 1/3 other categories - lecturers, senior lecturers, PostDocs, PhD students. Women are more than 1/3 of the staff. The balance of ages also looks like a good mix of older more experienced staff members and younger ones.

To mention, in the opinion of the Evaluation panel, the hiring of the postdocs is really a good practice, to enrich the academic staff.

The following information was provided from the University and assessed;

a) A list of permanent teaching staff of the field subjects at the HEI (at least half-time position and at least 3 years at the evaluated HEI) is provided, indicating the pedagogical and/or scientific degree, the pedagogical work experience, the research interests (listing 3 major works over the last 5 years), the practical work experience in the subject field, the subjects taught, and the current workload at the HEI;
b) The current ratio between the number of teaching staff of the field subjects and the number of students studying;
c) Teaching staff who deliver study field subjects and work at least part- time and for at least 3 years at the evaluated HEI as a share of all teaching staff who deliver field subjects within field study programmes are indicated;
d) The dynamics of lecturers-practitioners who have been teaching the field subjects for the last 3 years are described;
e) The dynamics of teaching staff turnover in the field is described (how the replacement of retired teaching staff and the education of young teaching staff are ensured).
f) Data proving the compliance of the teaching staff with the legal requirements;
g) Prospective teaching staff of the programme who have at least B2 level in their English are indicated as a share of all prospective teaching staff in the programme (if the evaluated programme is to be delivered in a foreign language or a joint study programme is evaluated).

No non-compliance of teaching staff was noticed in these aspects.

ANALYSIS AND CONCLUSION (regarding 5.1.)

The teaching staff is very reasonably balanced, well prepared and also very motivated to achieve learning outcomes. No non-compliance of teaching staff with regulations and with expectations touch study programme were noticed.

5.2.	Teaching staff is ensured opportunities to develop competences, and they are periodically evaluated

FACTUAL SITUATION

5.2.1. Opportunities for academic mobility of teaching staff are ensured

The teaching staff is aware about the teaching and staff exchange mobility options- including the Erasmus+ and is using the opportunities, as was confirmed also in Evaluation meetings.

Still, not all lecturers are active in mobility for various reasons - health, family, other work, language barrier.

For example, in 2024 only two academic persons related to teaching in the programme field (totally of 9 persons) used this opportunity to have some teaching experience abroad plus one person had an internship . Still this is significant improvement, as in previous years 2021 to 2023 the number was zero or one. Also the incoming teachers with Erasmus+ of two persons, is in some increase.

The staff is taking part in one Horizon EU project, where of course mobility is part of the project. Other sources of funding for mobility: KU Science and Study Support Fund supports its researchers' visits to conferences, funds earned by KU departments and “Future fund” of the University are allocated in cases where no external sources have been found to finance the visit.

Still to mention, while academic staff is visiting international conferences, such types of scientific travel could take place more often and in a regular systematic way, as was discussed during the Evaluation panel meeting with the teaching staff.

5.2.2. Opportunities for the development of the teaching staff are ensured

Continuing professional development is an essential part of the professional life of academic and administrative staff. In 2022, the Description of Qualification Development of KU Teaching and Research Staff was updated. The updated procedure according to the above-mentioned description shall be implemented in 2022-2023. This activity is assessed individually both at the time of attestation and in the calculation of salaries. The above-mentioned description identifies the groups of competences of academic staff, in which the KU encourages and supports the development of qualifications: development and improvement of subject, scientific, pedagogical competencies, and general competences (digital, communication, intercultural, managerial, etc.). In accordance with the procedure laid down by the Senate, every five years lecturers may be exempted from their teaching duties for a maximum of one year for the purposes of research and the development of their scientific or pedagogical qualifications. During this period, the lecturer shall be paid his/her average salary. KU staff shall be given the opportunity to improve their qualifications and prepare for doctoral studies. The KU Academic Staff Development Scheme also stipulates that the KU shall cover the full cost of one long-term research trip (≥14 days) every 5 years.

The opportunities for the development of the teaching staff are really good and the staff is using these opportunities. Also some projects are supporting the development of just teaching. For example the specific ERASMUS+ project European University for the Sustainable Development of Smart Coastal Cities is running from 1 September 2019. During this project, EU-CONEXUS Smart Campus is being created including joint Bachelor's, Master's and PhD studies, joint research programs, modern pedagogical technologies, sport and cultural events.

ANALYSIS AND CONCLUSION (regarding 5.2.)

The teaching staff have good opportunities to develop competences, and they are periodically evaluated. Furthermore, the periodical evaluation of the staff members, their achievements and development is well monitored and connected to the motivation and bonus-system.Teachers take much care about their students and try to create the best possible learning conditions for them, eg by having teaching in evening hours, giving individual help even for students’ own projects etc.

AREA 5: CONCLUSIONS

AREA 5	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are	Good - 3 Meets the requirements, but there are	Very good - 4 Very well nationally and internationally	Exceptional - 5 Exceptionally well nationally and

		substantial shortcomings to be eliminated	shortcomings to be eliminated	without any shortcomings	internationally without any shortcomings
Second cycle				X	

COMMENDATIONS

1. Teachers worry a lot about their students and try to create the best possible learning conditions for them, e.g. by giving lectures in the evenings, supporting the students' own interests and much more.

RECOMMENDATIONS

For further improvement

1. To be more internationally visible – participation in international projects, high-level (Q1, Q2) publications, international conferences etc.

AREA 6: LEARNING FACILITIES AND RESOURCES

6.1.	Facilities, informational and financial resources are sufficient and enable achieving learning outcomes

FACTUAL SITUATION

6.1.1. Facilities, informational and financial resources are adequate and sufficient for an effective learning process

On the KU campus, the university has created good conditions for master studying the EE study program and for the work of lecturers and researchers. The engineering department in general has about 40 rooms in total, dedicated to labs, specialized rooms, auditoriums and staff offices,

In more details - for theoretical lectures - the lecture halls are available “FMTNS 215 a.” (114 places), “FMTNS 201 a” (73 places), “FMTNS 404 a” (24 places), “FMTNS 115 a” (22 places). Theoretical lectures can also be taught in two Aula Magna Auditorium, AK1 and AK2, which accommodate 240 students in each of them, each with a computer and a projector for lectures.

For labs there are 9 specialized labs:
1) Electrical Engineering
2) Electronics
3) Laboratory of autonomous systems and artificial intelligence (Robotics laboratory)
4) Automatic Control
5) Electrical Machines and Drives
6) Workshop cabinets for electrical and electronics teaching
7) Mechatronics
8) Computer classrooms
9) Battery testing lab (joint with JSC “Vėjo projektai”)

KU has also open access centre laboratories. In these laboratories, students can do internships, design their master project prototypes. The KU fleet is also used for the study process: a scientific laboratory - catamaran "Mintis", where students can be acquainted with the ship's electrical and control systems.

Specialized software is used for studies in the field of EE, which is used by: Matlab, GNU Octave, SciLab, Labsoft, Siemens TIA Portal, Arduino IDE, SolidWorks (200 lic.) and SolidWorks Electrical, AutoCAD, MS Visio, EA-PSM, FEMM, National Instruments software, KiCAD.

In 2024 the design of the new facility of laboratories “Laboratories and Medical Simulation Center” in the main KU campus was started. The project should be finished in the autumn of 2025, and then there is a plan for construction. The part of the laboratories will be dedicated to the EE master study program.

KU has two dormitories for students, one of which was built in 2016 on the campus (170 places), and the other dormitory is located in Klaipėda, Statybininkų ave. 43 (165 places).

During the site visit - the classrooms, library and labs were found fully adequate.

So the facilities, informational and financial resources are adequate and sufficient for an effective learning process. Still, the university and faculty/department are working on further improving the facilities, especially of the labs. Also, as e.g. library services, IEEE Xplore database and other relevant databases could be good to have in the university. Still, due to limited budget and work-around approaches, explained during the meeting with the Evaluation Panel, this is not a critical point.

6.1.2. There is continuous planning for and upgrading of resources.

The process of planning and upgrading the resources needed to carry out the field studies is described in the light of changing student and teaching staffs' needs can be described in the following way. The existing research equipment and laboratory facilities, both in terms of their quantity and quality, are sufficient for conducting the practical work prescribed in the Master's study program in the EE study field and for the preparation of master's theses.

Still, as the plan for the improvement (if necessary) of the infrastructure, additionally, each year, in the months of January and February, the faculty formulates procurement plans, with input and proposals from various departments within the faculty. These plans encompass the procurement of materials, renovations to facilities, and the acquisition of equipment. The department ensures that its laboratory equipment remains up to date by actively engaging in project-based initiatives.

Also the library of the KU (including the library of the engineering department) has sufficient collections for teaching and reasonable funds to upgrade the collections in cooperation by the suggestions from the academic staff.

As an example, in 2024 the design of the new facility of laboratories "Laboratories and Medical Simulation Center" in the main KU campus was started (to be finished in 2025).

So there is continuous planning for and upgrading of resources, including of the labs. Several funds are available for this, like the "Future Support Fund".

ANALYSIS AND CONCLUSION (regarding 6.1.)

As overall, the facilities, informational and financial resources are sufficient and enable achieving learning outcomes. Also, the regular overview of the needs and planning of improvements in the teaching infrastructure is in place. From informational resources at least IEEE database is missing, but this is not a critical point. Also the labs are sufficient, but upgrading for the latest state-of-art level could be beneficial, of course.

AREA 6: CONCLUSIONS

AREA 6	Unsatisfactory - 1 Does not meet the requirements	Satisfactory - 2 Meets the requirements, but there are substantial shortcomings to be eliminated	Good - 3 Meets the requirements, but there are shortcomings to be eliminated	Very good - 4 Very well nationally and internationally without any shortcomings	Exceptional - 5 Exceptionally well nationally and internationally without any shortcomings
Second cycle				X	

COMMENDATIONS

1. Good or at least sufficient facilities, labs, classrooms, library etc. There are plans for further improvement of labs and periodic overview of the current situation and needs as input for the financial and other planning.

RECOMMENDATIONS

For further improvement

1. There is need for upgrading the labs with the latest technologies;
2. IEEE Xplore database and other relevant databases are necessary to have access. Still, as it was explained by both students and the staff, the students and staff have access to closed international databases by alternative ways, often as “*case-by-case*" purchasing of publications under interest.

AREA 7: QUALITY ASSURANCE AND PUBLIC INFORMATION

7.1.	The development of the field of study is based on an internal quality assurance system involving all stakeholders and continuous monitoring, transparency and public information

FACTUAL SITUATION

7.1.1. Internal quality assurance system for the programme is effective

The University has the certified ISO 9001:2015 quality system in place. Also improvements in the quality management are discussed by the administration and the staff, including possible introduction of the alternative quality system(s). Staff is aware of the importance of the quality and management of it. Also quality systems ISO 14001:2015 (*Environmental management*) and ISO 45001:2018 (*Occupational health and safety*) are certified in the KU.

The system of internal quality assurance of studies at KU operates in accordance with the following descriptions of the Quality Management System: *Study program preparation, evaluation and improvement process, Study implementation process, International degree-granting studies implementation process, International partial studies implementation process, Students' scientific and artistic activity management process, Students' provision process, Vocational guidance and career management process, Student and trainee admission process, Stakeholder feedback management process, Discrepancy management process, e*tc. The descriptions contain all the information related to the stages of the process (planning, implementation, control and improvement): activities, results, responsible persons and the most important documents regulating the process. The periodicity of internal evaluation is foreseen, which is usually one year. The principles of internal quality assurance of studies are according the main European Union higher education policy documents (Bologna and Copenhagen Declarations, Berlin and Bergen

All study program management and quality assurance decisions are made collegially.

The study program administration and quality assurance process is reflected in the Academic Information System used by KU, which ensures the harmonious management of study matters.

7.1.1.1. The structure of field study management and decision-making, and the periodicity of internal assessment are described; information on the ways and means applied to ensure the quality delivery of the studies is provided.

7tn June 2022, the Senate of KU approved a new Description of the quality assurance procedure for KU study programmes, which sets out the quality assurance processes for the development, implementation and improvement of the KU's undergraduate, postgraduate and professional study programmes. The internal analysis of the study programme is carried out annually, and its aim is to respond in time to the problems of study organisation, to introduce innovations and improve the quality of studies at KU, and to monitor the progress of the implementation of the Plan of Measures for the Improvement of the Field of Study and the Plan of Measures to Improve the Quality of Undergraduate and Postgraduate Studies. Based on the results of the analysis, a plan of measures to improve the areas of improvement identified during the internal quality assessment of the study programme is prepared or updated and implemented in the next study year.

At least twice a semester, the Department meets to discuss current issues of the quality of the study programme and feedback on individual courses. Social partners are invited to some meetings to provide suggestions and measures for changes to the study programme to improve the quality.

So, as described above, the quality assessment is done at least once a year and the process is structured by specific Plans, ensuring the quality delivery of the studies.

7.1.2. Involvement of stakeholders (students and others) in internal quality assurance is effective

The Department involves not only students and lecturers, but also stakeholders in the continuous development, assessment, and improvement of its study programs, as described below.

A notable strength of DE's initiatives lies in its communication with stakeholders, which include students, employers, and alumni. DE maintains close partnerships with over 30 industrial companies in the Klaipėda region, including entities like J*SC Vėjo projektai, JSC Mars Lietuva, JSC Proromsta, JSC Nord Robotics, JSC Techvitas Robotika, JSC Caverion Lietuva, JSC VMG Technic*s and more. These industry partners actively participate in a range of activities, including sharing their expertise through teaching in subjects like Industrial Electrical Equipment and Supply Networks and Autonomous Robot Systems. They also propose topics for student projects and FMT, promote educational programs, engage in activities organized by the Electrical and Electronics SFC, and contribute to self-assessment processes.

The internal quality of studies is determined by the strategy of implementing the resolutions of the KU Council and the Senate, the Rector's orders. The quality assurance of studies in the study program is supervised by the Electrical and Electronics Study Fields Committee (hereinafter - SFC), established by order of the rector of KU: head prof. dr. E. Guseinovienė, 4 members – 3 assoc. prof., 1 lecturer, 1 student IV year bachelor student and social partner, from JSC “Caverion Lietuva”. All study program management and quality assurance decisions are made collegially. This is one way, how students and lecturers, but also stakeholders are involved. In summary, involvement of all parties and feedback to social partners is provided in the following ways:

- students - through student representatives who are included in the activities of the SFC, the Faculty Council, the Senate, the KU Council and other KU committees and working groups;
- lecturers and administration - directly involved in the development of the curriculum in the SFC, other committees and working groups; in the Department of Engineering; and once a year in the faculty meetings;
- employers are informed and make their own suggestions for the improvement of the study programme during annual meetings and interviews; participate in thesis defences, the SFC and the KU Council;
- graduates - contribute to the improvement of the study program by evaluating the entire period of study and making proposals on the improvement of the program, are included in KU committees and working groups. .

So the involvement of the stakeholders (students and others) in internal quality assurance is effective. No problems were observed in meetings with the students, companies, staff and the administration.

7.1.3. Information on the programmes, their external evaluation, improvement processes, and outcomes is collected, used and made publicly available

7.1.3.1. Indicated what data is collected and made public about the delivery of the studies

The data collected during the implementation of the study program include for example student and lecturer mobility statistics, student progress and dropout data, as most important. Also data about integration of international studies, calculation of teaching load, is acquired. The exact data collected is specified and updated, if needed) in the corresponding Plans, described in the Quality system part.

The collected data is analyzed and presented at various meetings - of the department of engineering, the SFC, the Dean's Office and the Faculty Council.

The Quality Management System also collects and analyses annual indicators, which are set out in the relevant process descriptions. These are made available to all members of the academic community through annual report presentations and department meetings. The summarised information is made publicly available on the KU website in the annual KU Report.

The following information is also available on the KU website: requirements for admission to study programmes, results of study programmes, descriptions of study subjects, qualifications to be obtained, career opportunities, scholarships from employers and Klaipeda Municipality, other information related to the organisation of studies: legal acts and documents regulating the process of studies at KU. The results of the evaluation of study programmes, feedback from social partners, and opportunities for international studies and internships are also publicly available. The department of engineering has its own Facebook account, where it hosts information relevant to DE staff, students and graduates. LinkedIn is used as a tool to track graduates' careers.

7.1.3.2. Examples are provided on how the information collected on the delivery and evaluation of studies is used to improve the field studies

As an example, the department of engineering maintains close partnerships with over 30 industrial companies in the Klaipėda region, like SC Vėjo projektai, JSC Mars Lietuva, JSC Proromsta, JSC Nord Robotics, JSC Techvitas Robotika, JSC Caverion Lietuva, JSC VMG Technics and more. These partners participate actively in the work of the SFC, and contribute to self-assessment processes. Through these collaborative efforts with industry partners, university assesses students' readiness, identifies the demand for new competencies, evaluates the need for updates to the study program, and responds to changing job market requirements.

Information on the programmes, their external evaluation, improvement processes, and outcomes is collected, used and made publicly available. This is also a part of the quality system of the university, described previously.

7.1.4. Student feedback is collected and analysed

The student feedback is collected and analysed systematically. For example, at least twice a semester, the Department of Engineering meets to discuss current issues of the quality of the study programme and feedback on individual courses.

The detailed analysis of feedback results is carried out at least once per study semester by the DE implementing the study program. If necessary, the feedback results are analysed by the KU Student Union, departments of Academic Affairs, Science and Innovation, Communication and Marketing and/or other KU departments. The results of student feedback related to study subjects are presented to students and lecturers who taught the relevant subjects after the exam session and are discussed. Based on the obtained results, programs, the content of study subjects are improved or new subjects are introduced; problems raised by students are analysed, and lecturers are consulted. The feedback results are used during the competition and certification of lecturers, as well as for improving the quality of studies, marketing, KU strategic planning and other.

ANALYSIS AND CONCLUSION (regarding 7.1.)

In conclusion, the development of the field of study is based on an internal quality assurance system involving all stakeholders and continuous monitoring, transparency and public information.

AREA 7: CONCLUSIONS

AREA 7	**Unsatisfactory - 1** Does not meet the requirements	**Satisfactory - 2** Meets the requirements, but there are substantial shortcomings to be eliminated	**Good - 3** Meets the requirements, but there are shortcomings to be eliminated	**Very good - 4** Very well nationally and internationally without any shortcomings	**Exceptional - 5** Exceptionally well nationally and internationally without any shortcomings

Second cycle				X	

COMMENDATIONS

1. The quality system for monitoring of the running, monitoring and continuous improvement of the study programme works really well. There are action plans, periodically updated, all partners are well involved - the students, the teaching staff, the alumni and social partners. The situation is periodically and systematically analyzed and publicly presented.

V. SUMMARY

The Evaluation panel like to thank specially the Klaipėda University and all the participants from the university who were taking part in the evaluation process – for preparing the very comprehensive self-evaluation report (SER), for organizing the meetings with the administration, staff, students, alumni and social partners. And finally, thanks to everybody who participated in these meetings and shared their opinions and experiences.

The study aims, learning outcomes and and study programme are clearly in place and working well. Still, the door is opened for improvements by the quality system implementation and systematic and periodic analyzing of various aspects of the teaching of the study programme - the performance of students, satisfaction of employers etc.

Links between the research and the teaching in the frame of the study programme is very reasonable and visible. Both - the scientific projects, but also the cooperation with local companies with some applied research are linked to the studies. Important part here is preparing the final master thesis by students, as typically a R & D activity anyway, but being part of the study programme.

Student admission is clear and the information is simply available - for both local and international students. The support of students is working well. What is really good, the staff members are not only supporting the students in everyday studies, but also in doing the students their own hobby projects or projects for companies, eg for final thesis. Also the lab facilities are available for such activities.

Teaching and learning address the needs of students well and enable them to achieve intended learning outcomes. The achievement of the intended learning outcomes is supported by motivated and helpful teaching staff, facilities (labs, libraries). Access to higher education for socially vulnerable groups and students with individual needs is ensured.

The number, qualification, and competence (scientific, didactic, professional) of teaching staff is sufficient to achieve learning outcomes. The staff is really enthusiastic and motivated.

The facilities, informational and financial resources are sufficient and enable achieving learning outcomes. Also, the regular overview of the needs and planning of improvements in the teaching infrastructure is in place.

The internal quality assurance system for the study programme is efficient. There are action plans, periodically updated, all partners are well involved - the students, the teaching staff, the alumni and social partners. The situation is periodically and systematically analyzed and publicly presented.

As overall, the strength of this study programme is Very motivated staff (also supported by the motivation system by administration); very motivated students (supported probably by not only the academic staff, but also by families, facilities of the university, their working places in companies); Very good graduation Thesis, one reason for that – starting work on the Thesis topics from the first days of the study;

Still some possible places for improvements or concerns: Academic staff - while progress in in place, but still could be more international projects, high-level publications and citations etc; Labs could be

further developed with modern equipment; suggestion is to try to have even more contributions from the local companies.