



CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT

STUDY FIELD of MARINE ENGINEERING (E07)

at Klaipeda University

Expert panel:

Prof. Dr. Bettar O. el Moctar (panel chairperson), academic, University of Duisburg-Essen, Germany

Prof. Dr. Bjørn Egil Asbjørnslett, academic, Norges teknisk-naturvitenskapelige universitet, Norway

Prof. Dr. Krzysztof Czaplewski, academic, Uniwersytet Morski w Gdyni, Poland

Assoc.Prof. Dr. Srđan Vujičić, academic, Sveučilište u Dubrovniku, Croatia

Ugnė Viktorija Paulikaitė (student representative), Kauno technologijos universitetas, Lithuania

Evaluation coordinator - Paulius Zolubas

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Study Field Data

Title of the study programme	Marine Transport Engineering	Shipping and Port Engineering
State code	6121EX068	6211EX066
Type of studies	University studies	University studies
Cycle of studies	First cycle (undergraduate)	Second cycle (postgraduate)
Mode of study and duration (in years)	Full time (4 years)	Full time (2 years)
Credit volume	240	120
Qualification degree and (or) professional qualification	Bachelor's degree in engineering science	Master's degree in engineering science
Language of instruction	Lithuanian, Russian, English	Lithuanian, English
Minimum education required	Secondary education	Undergraduate education
Registration date of the study programme	April 01, 2016	January 29, 2007

CONTENTS

I. INTRODUCTION.....	4
1.1. Background of the evaluation process	4
1.2. Expert panel.....	4
1.3. General information.....	5
1.4. Background of the Marine Engineering study field at Klaipeda University.....	5
II. GENERAL ASSESSMENT.....	8
III. STUDY FIELD ANALYSIS.....	9
3.1. Intended and achieved learning outcomes and curriculum.....	9
3.2. Links between science (art) and studies	14
3.3. Student admission and support	17
3.4. Teaching and learning, student performance and graduate employment	20
3.5. Teaching staff	23
3.6. Learning facilities and resources.....	27
3.7. Study quality management and public information.....	28
IV. EXAMPLES OF EXCELLENCE	30
V. RECOMMENDATIONS	32
VI. SUMMARY	34

I. INTRODUCTION

1.1. BACKGROUND OF THE EVALUATION PROCESS

The evaluation of study fields is based on the Method of External Evaluation of Study Fields approved by the Director of the Centre for Quality Assessment in Higher Education (hereafter – SKVC) 31 December 2019 Order [No. V-149](#).

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

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

On the basis of this external evaluation report of the study field SKVC takes a decision to accredit study field either for 7 years or for 3 years. If the field evaluation is negative then the study field is not accredited.

- The study field and cycle are **accredited for 7 years** if all evaluation areas are evaluated as exceptional (5 points), very good (4 points) or good (3 points).
- The study field and cycle are **accredited for 3 years** if one of the evaluation areas was evaluated as satisfactory (2 points).
- The study field and cycle are **not accredited** if at least one of evaluation areas was evaluated as unsatisfactory (1 point).

1.2. EXPERT PANEL

The expert panel was assigned according to the Experts Selection Procedure (hereinafter referred to as the Procedure) as approved by the Director of Centre for Quality Assessment in Higher Education on 31 December 2019 [Order No. V-149](#). The site visit to the HEI was conducted by the panel on October 4, 2023.

Prof. Dr. Bettar O. el Moctar (panel chairperson), University of Duisburg-Essen, Germany
Prof. Dr. Bjørn Egil Asbjørnslett, Norges teknisk-naturvitenskapelige universitetet, Norway
Prof. Dr. Krzysztof Czaplewski, Uniwersytet Morski w Gdyni, Poland
Assoc.Prof. Dr. Srđan Vujičić, Sveučilište u Dubrovniku, Croatia
Ugnė Viktorija Paulikaitė (student representative), Kauno technologijos universitetas, Lithuania

1.3. GENERAL INFORMATION

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

No.	Name of the document
1.	SER_Marine Engineering
2.	SER_Marine Engineering_Annex 1_Study Plan
3.	SER_Marine Engineering_Annex 2_Graduate Theses 2019_2022
4.	SER_Marine Engineering_Annex 3_Teachers
5.	The list of elective courses for Bachelor students of various study forms
6.	The picture of the elevator
7.	Quality manual
8.	An example of the rector's order
9.	A number of students (bachelor's and master's) participating in scientific projects and activities

1.4. BACKGROUND OF THE MARINE ENGINEERING STUDY FIELD AT KLAIPEDA UNIVERSITY

The following information is based on the self-evaluation report (hereafter SER) of the Klaipeda University (hereafter KU). The SER was carried out by a self-evaluation team consisting of seven members (one professor, two associate professors, first cycle student, Personnel Director of a shipyard, an executive Director of the Association of Lithuanian Sea Cargo Companies, and an engineer from an engineering company).

Klaipeda University, founded in 1990 by the resolution of the Supreme Council of the Republic of Lithuania - the Restoration Seimas (Parliament), is a multidisciplinary centre of marine sciences and studies in the Baltic Sea region, integrated into international academic networks, in the course of more than three decades of its academic activity. Klaipeda has a well-developed engineering industry. In 2008, after the implementation of the program for the development of the Lithuanian Maritime Sector of the Integrated Science, Study and Business Centre (Valley) of KU, a modern scientific research infrastructure corresponding to its maritime specialization was created. Moreover, the research vessel "Mintis" was built in 2016 and the Marine Research Institute (MRI) was established in 2018. KU's maritime specialization is served by cooperation with the Klaipeda Science and Technology Park and the KU Business Incubator. The university is governed by the Rector, the nine-member Council and the Senate (35 members, including 7 students) – all elected for five years. The university administration consists of 3 vice-rectors, Departments of Studies, Science and Innovation, Organizational Services, Internal Audit Service, Communication and Marketing, Law and Public Procurement, Strategic Development and Economics and Finance and Accounting, Information Resources and Publishing and Service Centres, the Chief Financial Officer and the Rector advisors.

The University has a Quality Management System. Internal audits are performed every year, while external audits every second year. There is a procedure to follow up the findings of the audits.

The University offers Bachelor's, Master's, and Doctoral studies. On 1 October 2022, about 2311 students of all three cycles studied at the University. Although the number of students at KU has stabilized, the small number of students, especially in engineering, causes many problems not only for KU. Lecturers and students have access to a library with a print collection of around 0.5 million items and a student and lecturer support centre. The University has its own publishing house, which publishes monographs, scientific journals, conference proceedings, textbooks, educational books for students, and informative and occasional publications of the University and its departments.

Currently, the University has three 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 and 55 laboratories. The Faculty of Marine Technology and Natural Sciences (JTGMF) of KU comprise three departments: Engineering, Marine Engineering, Informatics, and Statistics. The Faculty offers first and second cycle study programmes in Chemical Engineering, Electrical Engineering, Electrical and Electronic Engineering, Mechanical Engineering, Manufacturing Engineering, Computer Science, Informatics Engineering, Civil Engineering, and Marine Engineering, which are relevant to the region. The first maritime engineering study programme in Klaipeda was launched in 1961. Since then, the University has had a close relationship with the maritime industry, which has a large number of marine engineering graduates.

The Departments dealing with maritime transport, port activities and port infrastructure were merged into a single Department of Marine Engineering. Currently, the Department of Marine Engineering runs the first cycle study programmes Marine Transport Engineering, Sea Port Engineering, Civil Engineering, and Port Structures, the second cycle programmes Shipping and Port Engineering, Port Structures, and the Joint International Doctoral Programme in Transport Engineering. Graduates of the colleges can apply for a Master's degree in engineering through the additional Integrated Engineering programme. The University is currently working on the integration of offshore wind farms development and operation in marine engineering studies.

The evaluation panel found good evidence of the teaching and learning processes in place to ensure that these expected learning outcomes are achieved. This is done through the thorough review of curriculum content and forms of its delivery. The program is updated every three years in collaboration with stakeholders. Examination regulations are available.

Bachelor's degree programmes in marine engineering aim to prepare engineering specialists with an interdisciplinary academic education able to work in the maritime industry and transport companies, ship design and construction, shipping and ports, logistics companies, applying innovative digital technologies, implementing ideas of smart and green autonomous

port, ship or e-logistics, combining the decisions made in economic, business, management, environmental protection and social impact aspects.

Master's degree programmes and their specializations in marine engineering aim to train maritime and port engineering specialists and researchers, to provide integrated knowledge and skills in maritime industry and shipping, sustainable port development, modern ship design, transport energy equipment efficiency and alternative and renewable energy, helping to realize the overall maritime industry, blue economy and advanced production context, meeting the latest international and national requirements.

Marine engineering programs at both cycles are unique in Lithuania. The need for these specialists is greater than the proposal in Klaipeda and Lithuania. In 2023 the analysis of the demand and supply of employees in Klaipeda city companies shows that in the next 2 years engineering graduates will satisfy only 40% of the demand.

There are research activities in the marine department, and formal research education and training programmes for the graduate study programmes, as well as a doctoral study programme in collaboration with other universities. The university has research infrastructure available that is relevant for the study field and context.

The teaching methods are described in the SER and interviews with staff and students provided further evidence to the evaluation panel that the full range of methods are deployed and that the teaching sessions are engaging and challenging. Similarly, there are a range of assessment methods designed to evaluate the knowledge, skills, and competences. Small numbers of students on the programmes entails that students benefit from individualised and focused teaching. A downside is that small teaching groups may limit the scope for debate and articulation of diverse views. However, the modular structure of the university entails that modules could be taken by students from other programmes, which bodes well with the opportunity for marine engineering students to engage with students from a variety of backgrounds. Twente five percent of the students are female and ten percent are international students. Twente five percent of the students drop out. This ratio should be reduced.

II. GENERAL ASSESSMENT

Marine Engineering study field and **first cycle** at **Klaipeda University** is given **positive** evaluation.

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	4
2.	Links between science (art) and studies	3
3.	Student admission and support	3
4.	Teaching and learning, student performance and graduate employment	4
5.	Teaching staff	3
6.	Learning facilities and resources	4
7.	Study quality management and public information	4
	Total:	25

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

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

3 (good) - the field is being developed systematically, has distinctive features;

4 (very good) - the field is evaluated very well in the national and international context, without any deficiencies;

5 (excellent) - the field is exceptionally good in the national and international context/environment.

Marine Engineering study field and **second cycle** at **Klaipeda University** is given **positive** evaluation.

No.	Evaluation Area	Evaluation of an Area in points*
1.	Intended and achieved learning outcomes and curriculum	4
2.	Links between science (art) and studies	3
3.	Student admission and support	3
4.	Teaching and learning, student performance and graduate employment	4
5.	Teaching staff	3
6.	Learning facilities and resources	4
7.	Study quality management and public information	4
	Total:	25

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

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

3 (good) - the field is being developed systematically, has distinctive features;

4 (very good) - the field is evaluated very well in the national and international context, without any deficiencies;

5 (excellent) - the field is exceptionally good in the national and international context/environment.

III. STUDY FIELD ANALYSIS

3.1. INTENDED AND ACHIEVED LEARNING OUTCOMES AND CURRICULUM

3.1.1. Evaluation of the conformity of the aims and outcomes of the field and cycle study programmes to the needs of the society and/or the labour market

The aims and learning outcomes of the first cycle study programme in Marine Transport Engineering (with specialisation in Naval Architecture and Shipbuilding) and the second cycle study programme Shipping and Port Engineering address a wide range of knowledge and methods which are in line with the demands of labour markets in Lithuania and the European Union (EU). The Department works closely with several social partners, such as AB Klaipėdos Nafta, an LNG terminal operator, in the development and implementation of the LNG-related study programme. Therefore, the students of the programme have their internships there, representatives of the company are present in the final thesis defence committee, teachers who are preparing to teach specialised subjects attend seminars and conferences together with the cluster members. Students are also invited to these events. As Lithuania started to prepare for the implementation of offshore wind farm projects in 2021, the Offshore Cluster started to analyse the possibilities for training specialists. In 2022, on the basis of an agreement signed with RWE Renewable (Germany), an offshore wind energy course is developed, with representatives of the company participating in the content development. They have already provided job descriptions for individual positions, which can be used to develop a list of student skills. The visit has demonstrated that these partners value highly their collaboration with the university and benefit from the skills of the graduates (Klaipėda University Marine Engineering SER, p. 8, 57).

The panel found that the Department of Marine Engineering has a clear understanding of social change. The team works consistently to develop their study programmes. The content and level of objectives and learning outcomes of both the first and the second cycle study programmes are relevant to the labour market. The extensive cooperation with social partners proves the appropriate focus of the objectives and learning outcomes. The graduates are very well prepared to meet the demand of the public and private sectors in Lithuania and internationally.

3.1.2. Evaluation of the conformity of the field and cycle study programme aims and outcomes with the mission, objectives of activities and strategy of the HEI

It is stated in SER that the academic staff of the marine engineering study programs and the Department of Marine Engineering implement the mission of KU, conduct research relevant to the maritime industry and shipping, train researchers in water transport engineering and bachelor's and master's degree programmes in marine engineering, create conditions for creativity, entrepreneurship, intercultural experience and networking among students and academic staff, engage members of the academic community in project-based interdisciplinary activities, promote collective progress and strengthen the innovation ecosystem of the region. The internationality of studies, intercultural experience of students and faculty have been enhanced through the EU-CONEXUS minor. The study programmes in the field of marine engineering aim

at synergies between science and business sector. Therefore, the special subjects are taught by teaching staff and practitioners who have a good experience in the subject matter.

The Department of Marine Engineering focuses on Sustainable Technologies, Blue and Green growth and a Healthy Sea. The objectives and outcomes of the study programmes are in line with the strategy of the KU.

3.1.3. Evaluation of the compliance of the field and cycle study programme with legal requirements

By Order No. V-1012 of 16 November, 2016, of the Minister of Education and Science of the Republic of Lithuania "On Approval Of The Descriptor Of Study Cycles", by Order No. V-1168 of the Minister of Education and Science of the Republic of Lithuania of 30 December 2016 "On Approval Of Description Of General Requirements For The Provision Of Studies", by Order No V-247 of the Minister of Education, Science and Sport of the Republic of Lithuania of 3 March 2023 "On Descriptor Of The Group Of Study Fields Of Technological Sciences", the first cycle study programmes and the second cycle study programme meet the legal requirements for higher education study fields.

The first cycle programs "Marine Transport Engineering", "Sea Port Engineering" are assigned to the group of engineering fields of study E07 Marine Engineering. Those who complete them will be awarded the Bachelor of Engineering degree. The scope of Bachelor's degree programmes is 240 ECTS. The programs include 15 ECTS of practice. The programs include 15 ECTS final thesis. 21 ECTS are allocated for general education subjects. The specialisation consists of no more than 120 ECTS. (Table 1.4) (Klaipeda University Marine Engineering SER, p. 12). The 2nd cycle programme "Shipping and Port Engineering" is assigned to the group of engineering fields of study E07 Marine Engineering. Those who complete it will be awarded the Master of Engineering degree. The scope of the 2nd cycle university degree programme is 120 credits. The programme includes a 30-credit final thesis. The specialisation consists of no more than 60 ECTS (Table 1.6) (Klaipeda University Marine Engineering SER, p. 13).

The expert panel finds that there is compliance with the field and cycle study programme and legal requirements.

Table No 1. Marine Transport Engineering study program compliance to general requirements for first cycle study programmes (bachelor)

Criteria	General legal requirements	In the Programmes
Scope of the programme in ECTS	180, 210 or 240 ECTS	240 ECTS
ECTS for the study field	No less than 120 ECTS	184 ECTS, 168 ECTS
ECTS for studies specified by University or optional studies	No more than 120 ECTS	26 ECTS, 52 ECTS
ECTS for internship	No less than 15 ECTS	15 ECTS
ECTS for final thesis (project)	No less than 15 ECTS	15 ECTS
Contact hours	No less than 20 % of learning	31-33%
Individual learning	No less than 30 % of learning	67-69%

Table No 2. Shipping and Port Engineering study programmes' compliance to general requirements for second cycle study programmes (master)

Criteria	General legal requirements	In the Programmes
Scope of the programme in ECTS	90 or 120 ECTS	120 ECTS
ECTS for the study field	No less than 60 ECTS	90 ECTS
ECTS for studies specified by University or optional studies	No more than 30 ECTS	0
ECTS for final thesis (project)	No less than 30 ECTS	30 ECTS
Contact hours	No less than 10 % of learning	26%
Individual learning	No less than 50 % of learning	74%

3.1.4. Evaluation of compatibility of aims, learning outcomes, teaching/learning and assessment methods of the field and cycle study programmes

The learning outcomes in the 1st cycle programme (bachelor) are divided into: 1) knowledge and understanding, 2) engineering analysis 3) engineering design 4) fundamental and applied research, 5) practical engineering skills, 6) personal and social skills. The learning outcomes in the 2nd cycle programme (master) are divided into: 1) knowledge and understanding, 2) engineering analysis 3) engineering design 4) research, 5) practical activity, 6) personal and social skills. The learning outcomes are well formulated and specific enough.

Bachelor: The first two years of study include subjects in general university education and subjects in general engineering, providing basic knowledge in mathematics and other natural sciences, as well as knowledge and cognitive skills in the humanities and social sciences; in the third and fourth years, subjects in basic marine engineering and special education, providing knowledge of ports, ships, ship energy systems, marine fuels, materials and elements of marine engineering, research methods, design, construction and maintenance.

The teaching methods are differentiated to best implement the objectives of the course and achieve the study outcomes. The following teaching and learning methods are used in the Bachelor of Marine Engineering courses: lectures, tutorials, laboratory work, individual consultations, seminars (small group teaching), internships in an industrial company, individual or team projects, distance learning using virtual learning environments, study trips, case studies, writing reports and essays, searching for and summarising relevant information, reading books and articles, preparing and presenting oral presentations, etc.

The following teaching and learning methods are used in the Master of Shipping and Port Engineering courses: Theoretical lectures are enriched with e.g. video material and photos, while exercises use problem solving and analysis, group exercises and discussions. Seminars on advanced technologies are prepared by analysing scientific literature. Students are invited to participate as audience members in various seminars and expert lectures, thus developing their lifelong learning skills.

The expert panel found that the objectives, learning outcomes, teaching/learning and assessment methods of the first cycle programmes are constructively aligned. As the programmes evolve, there is a formal process in place to ensure the transition from the first to the second cycle.

3.1.5. Evaluation of the totality of the field and cycle study programme subjects/modules, which ensures consistent development of competences of students

In undergraduate programs, engineering students study together and firstly learn the basics of engineering. From the 4th semester, the number of study programs and specialisation subjects gradually increases. Students receive many individual consultations. Some subjects are also taught jointly in 5-6 semesters (Economics, Business and Engineering Project Management, Human Safety), so students can connect with students of other specialties and perform group tasks.

Bachelor's degree programs in marine engineering prepare engineering specialists for work in the maritime industry and transport companies, ship design and construction, shipping and ports, and logistics companies, while applying innovative digital technologies, implementing ideas of smart and green autonomous port, ship or e-logistics, combining the decisions made in economic, business, management, environmental protection and social impact aspects.

Master's degree program aims to train maritime and port engineering specialists and researchers, to provide integrated knowledge and skills in maritime industry and shipping, sustainable port development, modern ship design, transport energy equipment efficiency and alternative and renewable energy, helping to realise the overall maritime industry, blue economy and advanced production context, meeting the latest international and national requirements.

At the first level, students receive a broad basic education combined with specific skills. At the second level, they can expand on these and develop more specialised competences at a higher level. Therefore, the expert panel noted that all programmes of study at both levels provide consistent development of students' competencies.

3.1.6. Evaluation of opportunities for students to personalise the structure of field study programmes according to their personal learning objectives and intended learning outcomes

The possibility for students to individualize their studies is regulated by the Regulations of Studies of Klaipeda University (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 Klaipeda University (Klaipeda University Marine Engineering SER, p. 21). Students have the possibility to choose university subjects from the list of elective courses offered in semesters 1 to 5 of the Bachelor's programme and in semesters 2 to 3 of the Master's programme.

Students can choose among three specialisations: Sea Port Management; Sustainable Marine Energy Engineering; Naval Architecture and Shipbuilding. For students studying concurrently

on a second degree programme or pursuing a second higher education diploma, an individual short-course study plan is available (Klaipeda University Marine Engineering SER, p. 21). Students have the possibility to postpone the time of the exam session or final thesis. Students can go to other higher education institutions for part-time study through exchange programmes.

Students have the right to study according to an individual study plan. They can choose university subjects from the list of elective courses, including EU-Conexus, they can choose among specialisations, they can take an individual short-course study plan, they can postpone the exams or the defence of final thesis. Therefore, the expert panel found good opportunities for students to personalise studies.

3.1.7. Evaluation of compliance of final theses with the field and cycle requirements

The University has regulations in place to ensure that general thesis requirements are met in both the first and second cycles of study. The principles governing the preparation of the thesis, the composition of the committee and the defence are set out in the General Requirements for Independent Written Work by Klaipeda University Students, approved by Senate Resolution No. 11-35 of 6 February 2020. The committee's principles for the thesis defence are also set out in the KU Student Regulations (2018). The Dean of the Faculty, on the recommendation of the Head of Department or the Head of the study programme, approves by order the topics and supervisors of the students' theses (Klaipeda University Marine Engineering SER, p. 23). The first cycle programs "Marine Transport Engineering", "Sea Port Engineering" are assigned to the group of engineering fields of study E07 Marine Engineering. Those who complete them will be awarded the Bachelor of Engineering degree. The scope of Bachelor's degree programmes is 240 ECTS. The load of the final thesis is 15 ECTS. The 2nd cycle programme "Shipping and Port Engineering" is assigned to the group of engineering fields of study E07 Marine Engineering. Those who complete it will be awarded the Master of Engineering degree. The scope of the 2nd cycle university degree programme is 120 credits. The load of the final thesis is 30 ECTS (Klaipeda University Marine Engineering SER, p. 12). The variety of themes that can be chosen is proven by the list of the final theses from 2019 to 2022 (Annex 2). The topics are diverse and consistent with the content of the study programmes. Thesis topics can be chosen in line with the applied research relevant to maritime transport and ship design companies and ports, which helps students to see the link between their research and practice and is good for their employability.

The panel finds that the final thesis meets the requirements of the 1st and 2nd cycle study programmes. The thesis topics are relevant and diverse. The assessment of the thesis appears to be fair and consistent.

Strengths and weaknesses of this evaluation area

Strengths

1. The objectives and learning outcomes of both the first and the second cycle study programmes are relevant to the labour market.
2. Extensive cooperation with social partners, i.e. internships in an industrial company.

3. A formal process is in place to ensure the transition from the first to the second cycle.

Weaknesses

1. N/A

3.2. LINKS BETWEEN SCIENCE (ART) AND STUDIES

3.2.1. Evaluation of the sufficiency of the science (applied science, art) activities implemented by the HEI for the field of research (art) related to the field of study

Research activities and research infrastructure development has been focused in the assessment period. There has been an increase in research results measured in publications, with a 2.4 times increase in publications points compared to the previous assessment period (SER, 74). The publication references listed per teacher shows topics that are relevant to the field of study, and that are published in internationally good and acknowledged scientific journals that in themselves are relevant for the research topics of the field of study (SER_Marine Engineering_Annex 3_Teachers). There is also a positive development in the 'teacher : researcher' balance with a development from 65/35% to 49/51% (SER, 79).

A doctoral programme is in place, in collaboration with other academic institutions, where the doctoral candidates receive attention for publishing and defending doctoral thesis' of high quality (SER, 75).

The research has a technological focus that is set into the context of coastal communities, and in collaboration with other academic institutions within the same context, and with corresponding research and development objectives (SER, 76-77, 83). The relationship with the social partners is well documented through the development of the 'Marine Valley', and also well supported by the social partner in the site visit. Adjunct teaching positions from industry is also an important part of this (SER, annex 3; 'practicing teachers' + 'working in ...').

The research facilities are new, very good and with examples of 'state-of-art' (SER, 87, and site visit) and are very well adapted to the study field. The importance and impact of the 'Marine Valley; the Integrated Science, Studies and Business Centre (Valley) for the development of the Lithuanian maritime sector' was well documented in the SER and from stakeholders and the research lab tour of the site visit.

Financing of research is supported by national and European funds, and has contributed well to both the infrastructure development, as well as the contextual importance and international collaboration of the research (SER, 83-89).

An increase in research publications has been realised in the reporting period, however still with an uneven distribution of publications among the teachers.

A good international research collaboration with academic institutions that share contextual development goals have been further developed, supported by a good financing scheme.

Very good to 'state-of-art' research facilities. We can agree to the fact and statement in the SER that KU have: 'modern marine science and technology research infrastructure developed under the Integrated Science, Studies and Business Centre (Valley) for the development of the Lithuanian maritime sector (2018) has contributed significantly to the implementation and impact of the programme' (SER, p.26).

The balance of disciplinary and inter-disciplinary research focus is also well focused, especially related to contemporary societal and contextual challenges as focused in the "Towards Sustainable Technologies, Blue and Green Growth and Healthy Seas" strategic science programme.

3.2.2. Evaluation of the link between the content of studies and the latest developments in science, art and technology

The BSc programmes have a relevant curriculum of basic courses, including specific courses for the contemporary focus on sustainable development within the field of study, that establish a good foundation for addressing contemporary developments in science and technology. The courses address both the discipline and technology level, as well as higher system levels. The MSc programme increases the research focus with specific research and innovation subjects; 'T000M079 Research and Innovation' and 'Research Work 2' with specialization specific subject codes (SER Annex 1). Guest lectures by international academic partners, industry representatives/domain experts, as well as online lectures from international academic partners, contributes to availability of the latest developments within science and technology.

Library services provide access to the latest documentation of developments in science and technology, through books and periodicals, both physically and through access to international databases. Research laboratories in active use, enables direct linkages between ongoing research and relevance for taught subjects.

Both the BSc studies and the MSc study have a relevant curriculum for the field of study, which both prepare for and include topics of the contemporary developments in science and technology. The MSc study has in addition two courses that specifically are addressed towards research and innovation, hence preparing and enabling the students to address and use the latest developments in science and technology. Their international academic network, as well as industrial stakeholders (social partners), contribute to the insight into the developments in science and technology, through guest lectures and online courses.

To better prepare for research and development, and documentation and dissemination of this, it would be relevant to see other forms of assessment than 'E' (exams), for instance the use of reports following a research documentation template, also preparing the student for the reporting and defence of their final thesis.

3.2.3. Evaluation of conditions for students to get involved in scientific (applied science, art) activities consistent with their study cycle

Students take part in research related activities during their study through problems and tasks in their courses, as well as in their final thesis (SER, 93 and part of 94). The students in the BSc programmes have internships/practice and final thesis in the last semester where they can take part in applied research. The students of the MSc programme have formal research and innovation courses throughout the study, preparing them for more formal research and innovation tasks in their final thesis. The students can also have internships in the university research laboratories. A procedure for how to address and approach research tasks is also established and used by the students in their research oriented tasks.

The students are also informed about scientific events, and can have access to conferences arranged by the faculty of their study programme (SER, 95), as well as student conferences in relevant study fields. Students are further encouraged to take part in further research opportunities, and financing schemes with financial incentives for individual students' participation in research and dissemination activities are also in place.

The research topics and context as presented in the list of final thesis show the relevance both with respect to the study field and geographic context (SER, Annex 2 – Graduate Theses 2019-2022). Examples are also given of students that have received prizes for their research, showing that the university has 'lead researcher' candidates among their students.

In summary, the SER gives examples of different research activities and methods that students can apply for and take part in, established by active researchers, with access to state-of-art research facilities, in an international academic research collaboration network, and with stakeholders from relevant maritime and marine industry and public management. Dissemination opportunities, and financial incentives, are also available, both as publication at conferences or in scientific journals (with supervisor), in student (design) competitions, and as thesis submitted for public prize evaluations – for instance several students 'awarded the Klaipeda Municipality Prize', further student 'awarded by the Klaipeda Industrialists' Association'.

Hence, the conditions for students to get involved in scientific activities are good. However, with reduction in student number, and an improved 'researcher : teacher' balance, very good research infrastructure within the university, more emphasis should be placed on active participation in organized (applied) research. Should it be more mandatory – more than the final thesis, and should research participation be organised in groups, where 'lead students' could develop researcher management skills in the group, and also raise the research insight and interest for their fellow students – an option for university, which could involve more students into research.

Strengths and weaknesses of this evaluation area:

Strengths:

1. Improvement in research publications compared to the previous assessment period.

2. Very good research infrastructure, with 'state-of-art' examples.
3. Improvement in 'researcher : teacher' balance.
4. Doctoral programme in collaboration with other academic institutions, with positive acknowledgement of quality of doctoral theses.
5. Good academic partnerships: international research network with a formalised collaborative network of academic partners through the joint research programmes EU-CONEXUS and -PLUS.
6. Industrial partnerships: participation in and attractiveness for industrial research partner projects.
7. Use of project funding to develop their research infrastructure, hence strengthening their opportunity for improved research position.
8. Incentive system for research participation, both for faculty and students.

Weaknesses:

1. The formal introduction to research work should be increased in the study plan at the undergraduate level.
2. The potential (study program has a good resource basis for this with improved 'researcher : teacher' balance, very good research infrastructure, as well as a good research network both domestically and internationally) to bring more students into formal research activities and raise the level of students' awareness and insight in research can be utilized more effectively. Assessing mandatory versus voluntary research activities, individual versus student group based research activities may bring new insights. 'Lead researcher' roles among both faculty and students could also be assessed, to check for 'follower' effects in research activity.

3.3. STUDENT ADMISSION AND SUPPORT

3.3.1. Evaluation of the suitability and publicity of student selection and admission criteria and process

The admission conditions and requirements for applicant to the KU, which is presented in Lithuanian in KU website (<https://www.ku.lt/lt/bakalauro-studijos-2>, <https://www.ku.lt/lt/magistranturos-studijos-3>). The process of admission for Lithuanian and EU countries (those who can study at state-funded places) to first-cycle study programs is centrally determined and takes place during the General Admission Period, which is regulated by the Association of Lithuanian Higher Education Institutions (LAMA BPO) and in accordance with Admission rules considered by the Faculty council and approved by the University Senate. For third-country citizens, institutional admission is open. Under this procedure, applicants compete for available slots and must meet certain minimum requirements, including having completed at least twelve years of school education. Applicants are ranked and admitted based on the availability of slots, some of which are funded by the state. Admission scores for "Sea Port Engineering" and "Marine

Transport Engineering” study programs are calculated from Lithuanian state exams or the annual high school diploma grades. The application system for international students is through KU website www.ku.lt.

During the last three years, the number of the students enrolled in the “Marine transport engineering” study program was stable (20 in 2020, 24 in 2021 and 36 in 2022). The lowest admissions competition score was 5.48, and the highest was 10.81. Over three years the total number of students who signed the contracts were 70. During the institutional admission of foreign students, the following were admitted to the Marine Transport Engineering program: 2020 – 12, 2021 – 14, 2022 – 3 foreign students (Ukrainians).

The admission process is well presented in all languages in KU website, which is very informative and easily accessible for Lithuanian students. The English version of the KU webpage has less information than the Lithuanian version. Despite that, the expert panel states that the admission procedures are transparent and well communicated, as this is insignificant drawback, that could be quickly and easily coped with.

3.3.2. Evaluation of the procedure of recognition of foreign qualifications, partial studies and prior non-formal and informal learning and its application

Every year, the procedure for crediting study results at other higher education institutions is approved by the Senate, the crediting procedure is described in the KU study regulations. At the University, 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, as evidenced in SER. To ensure the mobility of students between countries and to recognize their results obtained abroad and periods of study abroad, Klaipeda University applies the European Credit Transfer System (ECTS). The learning outcomes of a person, who has studied in another higher education institution or foreign higher education institution, shall be credited with the results of their studies in accordance with the procedure laid down by the Senate of KU. Klaipeda University has an evaluation and recognition of competences acquired through informal and self-education, which is an officially recognized practice in EU countries.

The procedure for recognition is fair, well organised and appears to work well in practice. Student feedback during the visit was good.

3.3.3. Evaluation of conditions for ensuring academic mobility of students

Mobility is encouraged in KU. Students have many opportunities to participate in the selection for Erasmus+ studies abroad and go abroad for studies. Over the years of 2019 and 2020, 11 Marine Transport Engineering and Sea Port Engineering students of bachelor’s degree went to Erasmus+, none over the last 2 years. Over the years of 2021 and 2022, only 5 master’s programme Shipping and port engineering students went on Erasmus+. However small number of Erasmus students is the consequence of not so big total number of students in this study field.

All information about the student mobility opportunities is published on KU's website, it includes the amount of ERASMUS+ scholarships, countries and all the other needed information for students.

The university provides many Erasmus+ opportunities for students, not only for studies, but also for internship, but only a few students tend to use the mobility opportunities. University could step up its efforts to encourage and promote student mobility thus easily overcoming this flaw. Therefore experts state that conditions for academic mobility of students are clear, transparent and well communicated.

3.3.4. Assessment of the suitability, adequacy and effectiveness of the academic, financial, social, psychological and personal support provided to the students of the field

The SER outlines the extensive array of support services offered by the university to assist students with their academic progress and well-being. Specialised departments are in place to offer information and give access to support resources related to housing, financial aid, counselling, and various other aspects. Students are advised about career opportunities during lectures and meetings with alumni and potential employers are organised, they are also invited to student theses defences and student conferences.

Students are given all the information about scholarships, studies, and mentors during the first study year. They also are provided with all the psychological, spiritual, career support they need.

3.3.5 Evaluation of the sufficiency of study information and student counselling

The SER presents a detailed report of the study information system and counselling. Throughout the years, information about various activities related to the study process is provided to students through various information sharing channels. All the information related to lectures are provided on Moodle or Outlook. According to the KU study regulations, each lecturer works for the assigned number of hours per semester, advising students on homework, individual or group assignments and/or other study-related issues. Consultations are provided live, at officially announced hours, as well as using the virtual learning environment Moodle; various electronic platforms such as Zoom, Teams, e-mail, discussion forums and other tools that are convenient for both the teacher and the students. If necessary, opportunities are created to study according to an individual study schedule.

The expert panel found that the university has a system in place to inform and to advise students regarding any studies questions.

Strengths and weaknesses of this evaluation area:

Strengths:

1. University ensures that the students can have their needs assessed and can seek support at different levels of the university.

Weaknesses:

1. The Lithuanian version of the university web page has a lot more information than the English version, which might give some disadvantages for the foreign students.
2. Erasmus+ program doesn't seem very popular among students.

3.4. TEACHING AND LEARNING, STUDENT PERFORMANCE AND GRADUATE EMPLOYMENT

3.4.1. Evaluation of the teaching and learning process that enables to take into account the needs of the students and enable them to achieve the intended learning outcomes

Students are encouraged to participate in the study process in various ways and forms, using different methods. To achieve the anticipated learning outcomes of study courses, the following study methods are used: lectures, exercises, team project, group work, individual work, individual project, analysis of a scientific paper, oral presentation, literature analysis, laboratory work, case studies, practice reports, discussions, seminars, control work, etc.

Individual work of students is carried out by carrying out individual projects, the scope of which is specified in the study program. In addition, students prepare works (projects) during the course. The knowledge acquired in this way is developed during teamwork in groups of several people. Ways of evaluating student progress are described in course descriptions.

After completing their studies in the evaluated field of study, students have the opportunity to continue their studies at second-cycle studies, which are carried out at the university. They can also study at other universities in the EU with which the University cooperates.

Generally, the information contained in the SER was confirmed during the visit of the evaluation team. Students complete their studies by participating in various forms of classes. The variety of forms of teaching makes it easier to achieve the intended educational goals. Graduates have the opportunity to improve their qualifications at second-cycle studies organized by KU. The university offers 5 master's degree fields of study. In addition, the university, together with the University of Vilnius, offers doctoral studies. A previous visit by the evaluation team indicated that the university lacks an automated anti-plagiarism system. The university has introduced the "OXSIKO" application on the Moodle platform, which compares submitted studies with published scientific articles that have a doi number. The negative side is that the application does not compare students' previous works, for example final thesis (no information on the OXSICO official website). However, the evaluation team positively assesses the progress in this area and does not submit any comments.

3.4.2. Evaluation of conditions ensuring access to study for socially vulnerable groups and students with special needs

According to the information provided in the SER, the university is adapted to students with special needs. The new buildings of the university have elevators and toilets to enable the mobility of this group of students. In addition, videos and other educational materials are made available in a virtual environment. Monitoring is carried out inside the buildings, which allows for a quick reaction in the event of unforeseen events.

Libraries are equipped with hardware and software that enable converting texts into audio format or changing the font size, contrast, or background colour of the read publication. In addition, there are computers adapted for students with physical disabilities.

During the visit, the evaluation team confirmed that the new buildings are suitable for people with special needs. However, it wasn't possible to check whether and how old buildings were adapted for students with special needs. The university announced that it is trying to adapt old buildings depending on the availability of financial resources. Moreover, the evaluation team did not see the library, so the evaluation of the library facilities was made only on the basis of the self-evaluation report.

3.4.3. Evaluation of the systematic nature of the monitoring of student study progress and feedback to students to promote self-assessment and subsequent planning of study progress

Student progress is monitored on three levels: subject, course, study programme. Feedback on progress is provided to interested parties in accordance with the "Description of the procedure for organizing study feedback at Klaipeda University". It is a document which was approved by Rector in 2019.

At the "subject" level, students' progress is assessed by the teachers conducting the subject. The teacher gives an assessment at the end of the semester. At the "course" level, students' progress is monitored by the study administration team. The team creates a student ranking and identifies emerging problems in the implementation of the study program. The team, together with the study program committee, conducts an analysis of students' progress. At the "study programme" level, the Department responsible for the field of study evaluates the implementation of education once a year.

During meetings with teachers and students, it was confirmed that the university has a three-level system for monitoring students' progress. The results of individual students' projects are also used in research projects carried out at the university. Such use of the results of work is very appropriate and clearly indicates that the learning outcomes have been achieved. The evaluation team gives positive reviews to the methods used to monitor student progress.

3.4.4. Evaluation of employability of graduates and graduate career tracking in the study field

The university presented information on the employability of its graduates for the period of 3 years (2019-2022). However, SER did not specify how this information was obtained. University and the Faculty of Marine Technology and Natural Sciences have information from the Government Center for Strategic Analyzes on the employment of graduates. The study program is consulted with external stakeholders. Thanks to the proposed changes, the study program was awarded the Investors' Spotlight (Recommended by Employers) Quality Mark. During meetings with different groups during site visit experts had a chance to make sure that students usually start working while studying, that results very high employability rates of marine engineering graduates.

The information contained in the SER on monitoring the career of graduates in the assessed field of study is sufficient. Students usually start working while studying, so marine engineering graduates have very high employability rates. The university is interested in monitoring the career of graduates and showing their employment opportunities. This has an impact on the recruitment process of new students.

3.4.5. Evaluation of the implementation of policies to ensure academic integrity, tolerance and non-discrimination

Principles and measures to ensure academic integrity, tolerance and non-discrimination was described in the KU academic ethics code which was adopted by the senate of KU in 2019

Teachers have a responsibility to avoid ambiguous, extra-academic relationships with students. At the beginning of studies, students sign an agreement obliging them to observe academic discipline and student ethics.

The principles of counteracting intolerance and discrimination are properly described.

During the visit of the evaluation team, the functioning of the KU academic ethics code at the University was confirmed. The procedures described in the code help to avoid events that violate academic honesty, tolerance, and non-discrimination. During the conversations during the visit, the team was informed that such events do not take place at the university.

3.4.6. Evaluation of the effectiveness of the application of procedures for the submission and examination of appeals and complaints regarding the study process within the field studies

The right of students to lodge appeals regarding the assessment of their learning progress is described in the Study Regulations in force from 2018. The section "appeal procedure" defines the rules and procedures for appeals. In addition, students have the opportunity to report violations of the rules of ethics. Such problems are addressed to the KU Ethics Committee.

The procedures for submitting and considering appeals and complaints regarding the course of studies in the evaluated field of study, as well as reporting violations of ethical principles, are described in university documents. Persons responsible for their application know their obligations arising from documents describing the methods of considering appeals and complaints and reacting to cases of violations of ethical principles. The self evaluation report mentions the existence of policies and procedures (page 40-41), however it lacks specific data or examples of cases related to academic integrity, discrimination, or appeals. If there are none - then it raises questions as to the rigour of procedures.

Strengths and weaknesses of this evaluation area:

Strengths:

1. Three level study progress monitoring policy and practice ensure achievement learning outcomes of study programs.
2. Students usually start working while studying, so marine engineering graduates have very high employability rates.
3. The SER and site-visits outline clear and comprehensive policy and procedure practice related to academic integrity, tolerance, non-discrimination, and appeals. This clarity ensures that all stakeholders understand their rights and responsibilities.

Weaknesses:

1. Lack of data on numbers of cases related to academic integrity, discrimination, and student appeals.

3.5. TEACHING STAFF

3.5.1. Evaluation of the adequacy of the number, qualification and competence (scientific, didactic, professional) of teaching staff within a field study programme(s) at the HEI in order to achieve the learning outcomes

The teachers are recruited based on the laws of the Republic of Lithuania and the resolutions of the KU Senate. The composition of teachers corresponds to the document of December 30, 2016 No. V-1168 "General requirements for conducting studies": 65% (at least 50%) of BSc subjects are taught by researchers, 100% (at least 80%) of Master's programme teachers are doctors of science. The qualifications of the teachers correspond to the description of the qualification requirements and certification procedure for the positions of the University of Klaipeda, prepared in accordance with the regulation of the Lithuanian Science Council of May 16, 2011 Resolution No. VII-71 "On the approval of the description of minimum qualification requirements for positions of research workers of state research and study institutions" („Valstybės žinios“, 2011, No. 60-2882), based on the recommendations of the European Commission on the Charter of European Researchers and the Code of Conduct for the Recruitment

of Researchers (OL L 075/67, 2005), the order of Minister of Education and Science of the Republic of Lithuania of July 10, 2010 No. V-1128 (revision of Order No. V-572 of the Minister of Education and Science of the Republic of Lithuania of April 8, 2011) "Methodology for evaluation of scientific (art) works of science and study institutions" („Valstybės žinios“, 2011, No. 40-2335) and the Statute of Klaipėda University. The description regulates the mandatory qualification requirements for persons who are certified and who seek to occupy the positions of teachers and research workers through a public tender for a 5-year term or, by order, for one year or less.

Twenty six teachers teach the subjects of the specialty. 39% of teachers are associate professors, 15% are professors, 11% are teachers with a doctoral degree, 30% are teachers without a doctoral degree and 7% are assistant associates. The subjects of the field of study are taught by ten teachers who work at least half-time and for at least 3 years at the rated higher education institution. Another three teachers have 0.4-0.48 full-time positions.

The work experience of teachers is distributed in similar proportions: up to 15 years – 39%; 15-25 years old – 30.5%; over 25 years old – 30.5%. The transferability of knowledge and experience from senior teachers is ensured, as the department is filled with doctoral students and young doctors of science every year. Women make up 39% of teachers. Marine engineering professors teach not only students from their own programs, but also students from other engineering majors, as well as KU students who choose general education or engineering subjects, so the teacher-student ratio can be significantly higher depending on the semester. Many of the teachers are active researchers and, as a minimum, hold Masters Degrees and work within the maritime fields.

All Bachelor and Masters Modules are taught, and final masters theses are supervised by teachers holding doctoral degrees, who are also active in national and/or international research projects. Bachelor students' theses may be supervised by marine engineering doctoral students, whereas Masters Theses must only be supervised by colleagues holding PhDs.

Established collaborations with practitioners working in governmental and non-governmental institutions ensure that the teaching group is up to date and able to ensure their teaching is relevant to the technical and economic needs of Lithuania. The teaching group benefits from the wider University, which is a relatively small institution forged out of a commitment to maritime engineering needs and disciplines.

85% of the marine engineering field teachers speak English, the required level is B2. Some subjects are taught in English and Lithuanian by different teachers.

On average, in the years 2019 to 2022, about five publications per year appeared in international journals (Q1 or Q2). It was not clear from the SER which international research projects, such as project Horizon Europe, were funded by the EU and to what extent they were funded.

All expert panel members agreed that the number of teaching staff and their qualifications and competences within their field study programs are adequate to achieve the learning objectives.

The panel judged the teaching to be collectively good to very good. The associate and full professors should increase their national and international activities by participating, e. g., in EU-funded research projects. In the long run, the requirements for English level teaching should be increased from B2 to C1 levels. Although fully 85% of the lecturers are certified at the B2 or higher level in English, it would be preferable if all lecturers were to be certified at the B2 or, preferably, the C1 or higher level. The panel members agreed that there was a robust collegiality and a shared commitment to the marine engineering field fostered by their institution.

3.5.2. Evaluation of conditions for ensuring teaching staffs' academic mobility

KU uses the programs ERASMUS+, and participates in the Partners4Value project, according to which academic staff can go to a company or research institute or invite an expert to KU. Mobility projects were also implemented with non-EU countries (Ukraine, Georgia, China). In 2018, four lecturers working in the field of LNG went to Shanghai Maritime University (SMU, China), then three lecturers from SMU visited KU. The ERASMUS+ project European University for the Sustainable Development of Smart Coastal Cities has been running since 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; more attention is paid to the integration of people with disabilities, the needs of the local community, focusing on mobility and internationality. The parallel Horizon 2020 EU-CONEXUS Research for Society project, which aims at a qualitative transformation of the Alliance's scientific activities, has a budget of 2 MEUR, of which KU's share is 0,5 MEUR. With the funds of this project, joint scientific research groups are formed, the mobility of Alliance scientists is financed, the connection with regional business and industry is strengthened, and new project applications are prepared to ensure the activities of EU-CONEXUS R&D structural units. Other sources of funding for mobility: KU Science and Study Support Fund supports its researchers' visits to conferences, funds earned by KU departments are allocated in cases where no external sources have been found to finance the visit. Financing of trips of scientists and science managers of the Lithuanian Science Council LINO LT, etc. The KU Senate has a policy that scholars may take a sabbatical once every 5 years to enhance their research competence.

Countries where KU marine engineering staff have collaborated include the universities of Trieste and Genoa (Italy), the University of Athens (Greece), the University of Rostock, the Istanbul Technical University (Turkey) as well as the Universities La Rochelle (France), Zadar (Croatia), Bucharest Civil Engineering (Romania). Mobility projects were also implemented with non-EU countries (Ukraine, Georgia, China).

The SER and the expert panel's discussion with staff provided ample evidence of staff contributing to professional associations, attendance at international conferences. Although there are many opportunities, not all teachers are active in mobility for various reasons - health, family, other work, language barrier.

The evaluation panel found that the level of communication and exchange with foreign countries is good. For instance, the number of teachers who went abroad and the number of visiting

teachers and scholars at the university have increased since 2020. However, the number of outgoing teachers is on a low level, and this level should be increased. We strongly recommend promoting mobility of teachers.

3.5.3. Evaluation of the conditions to improve the competences of the teaching staff

In 2022, the Description of Qualification Development of Klaipeda University Teaching and Research Staff was updated. The updated procedure has been 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 University 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 teachers 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 teacher shall be paid his/her average salary. University staff shall be given the opportunity to improve their qualifications and prepare for doctoral studies. The Klaipeda University Academic Staff Development Scheme also stipulates that the University covers the full cost of one long-term research trip (14 days or more) every five years.

Systematic planning of the professional development of each academic staff member helps to assess the need for the necessary resources and to better use funds allocated for this purpose, including for short-term professional development. While in 2016 about 59% of teaching and research staff and 19% of other staff participated in the process of upgrading their qualifications, by 2020 this was increased to 85% of academic staff and 36% of non-academic staff. For internships abroad, all external and project sources are used, including the Erasmus+ program.

During the 2014-2022 funding period, the qualifications of the University's staff were upgraded through competitive and targeted funding from the Structural Funds. During the period under review, an average of ten training sessions were organised annually at the University for groups. The training sessions were dominated by topics such as research methodologies, new teaching methodologies and techniques, academic writing, didactic skills, foreign language learning, general skills (including conflict management, personal effectiveness, etc.). Whenever possible, staff members were interviewed and training topics were selected according to the prevailing needs.

Currently, lecturers of the Marine Engineering field use the KU Virtual Learning Environment for the provision of information on the subjects to the students, for the organisation of examinations and final thesis defences. However, according to the students no online lectures are offered. Every year, a list of faculty members wishing to go on an internship is drawn up. Teachers have the opportunity to choose the place where they would like to do their internship. Academic and non-academic staff plan their activities for each year and submit reports at the end of the year. The submitted data are combined and analysed in the annual reports of departments, faculties and the entire university. In the KU Personnel system, academic achievements

are filled in every year, after which a variable part of the salary for one year is determined for comparative assessment teachers and researchers.

The average number of publications in international journals (Q1 or Q2) in 4 years (2019-2022) is around five per year. It was not clear from the SER which international research projects (e.g. EU research programmes such as Horizon Europe) were funded and to what extent.

The expert panel judged that the opportunities to improve the competence of the teaching staff are good. However, the SER did not include data on the number of staff members who took advantage of the KU training courses although, in meetings with the panel, some members indicated they had done so. The limited empirical data provided made judgement difficult. The panel suggests that measures should be taken to ensure that staff members have enough time and that they are actually able to take advantage of training offered by the University to enhance their competences. Furthermore, the panel suggests that the teaching staff members benefit from longer term sabbaticals for research and teaching.

Strengths and weaknesses of this evaluation area:

Strengths:

1. Strong ethos and commitment to interdisciplinary marine engineering approach.
2. Good competences in the subject area.
3. Number of teachers is relatively large, considering the ratio of the number of teaching staff to the number of students studying (around 5).

Weaknesses:

1. Research activities should be increased on the international level by participating in more international research projects.
2. The number of publications in international, peer reviewed journals should be increased.
3. Lectures should be offered online. This may help to reduce the drop out ratio.
4. Low mobility of staff.

3.6. LEARNING FACILITIES AND RESOURCES

3.6.1. Evaluation of the suitability and adequacy of the physical, informational and financial resources of the field studies to ensure an effective learning process

Laboratory and practical work is carried out in modern laboratories equipped with research stands relevant to the subject program and auditoriums equipped with organizational equipment. Table 1.24. of the SER Klaipeda Marine Engineering shows a list of modern equipped laboratories with modern equipment (SER Klaipeda Marine Engineering, p. 48). KU library is ac-

cessible to students with individual educational needs: a) individual lifts are equipped for students with mobility impairments; b) students who have visual impairments, dyslexia, dysgraphia, dyspraxia and other disorders have appropriate equipment at their disposal.

The infrastructure for teaching and learning, including auditorium, office and study spaces, library, computer rooms, software, electronic and digital resources, are excellent, adequate in all aspects and up to date.

.6.2. Evaluation of the planning and upgrading of resources needed to carry out the field studies

The physical and digital infrastructure is continually assessed and updated; new software packages are made available as required and, as mentioned above, staff and students have a choice of appropriate software as was ascertained during site visit.

There is an ongoing assessment of physical and information infrastructure suitability and needs, which is updated as required. There is good access to international research and scholarship through the e-library.

Strengths and weaknesses of this evaluation area:

Strengths:

1. Adequate infrastructure is available for students and staff; a particular strength is the availability of a wide range of online tools for teaching and learning.
2. The students have access to well-equipped spaces for individual and group work.

Weaknesses:

1. N/A

3.7. STUDY QUALITY MANAGEMENT AND PUBLIC INFORMATION

3.7.1. Evaluation of the effectiveness of the internal quality assurance system of the studies

KU has a quality management system ISO 9001:2015. Quality management at the University is based on the ISO system and internal regulations. The structure of quality management and decision-making is well described in SER. The periodicity of their implementation is also given.

The SER also describes human resources intended for effective management of the field of study. Internal evaluation of the study process is usually carried out once a year. The Faculty of Marine Engineering and the heads of study are responsible for the implementation of the field of study. The person responsible for managing the study program is an academic teacher with

teaching and research experience in accordance with the field of study. Due to the large number of specialties, specialty managers are also appointed. Proposals for changes in the program of studies are presented to the Marine Engineering Study Field Committee (SKK). SKK submits proposals for changes to the Senate of the KU. Proposals approved by the Senate are implemented in the curriculum. Twice a semester, the Faculty conducts an analysis of the quality of the study program.

During the visit to the University, the data contained in the SER were confirmed. It is very good that the university has an ISO 9001:2015 quality management system. This allows for a more frequent assessment of the quality of education in accordance with the procedures included in the ISO quality management system procedures than the visits of evaluation teams. People responsible for implementing the quality system know their duties and procedures that must be initiated when disturbing events occur. Frequent and appropriate evaluation of the study program carried out in the process of internal quality of studies prevents undesirable situations from occurring.

3.7.2. Evaluation of the effectiveness of the involvement of stakeholders (students and other stakeholders) in internal quality assurance

The involvement of students in the process of evaluating the course of studies is described. After the end of the semester, students complete study evaluation questionnaires. The results are analysed at faculty meetings. The results of the survey are made public.

In addition, representatives of external companies (representatives of employers) are invited to evaluate the study program. Their opinions are taken into account in the proposals for changing the study program submitted to the Senate for approval.

The information contained in the SER was confirmed during the evaluation team's visit to the university. A very good element related to ensuring the quality of studies is the fact that the opinions of external and internal stakeholders are made known to the academic community. However, it seems that the exchange of views on study plans in a bilateral setting does not provide an objective opinion of the employers' community. Therefore, the evaluation team proposes to consider the possibility of creating a body at the university, composed of a wide range of employers, which would develop proposals for changes in the study plan that would suit not only separate company, but the entire employer community.

3.7.3. Evaluation of the collection, use and publication of information on studies, their evaluation and improvement processes and outcomes

Information on studies is published on KU website. Additionally, the aggregated statistics of the students' evaluation questionnaires are published too. Information on studies is published on KU website. Additionally, the aggregated statistics of the students' evaluation questionnaires are published too. During the recruitment period, all information necessary for candidates for studies is published on the university's website. In SER was described how the information collected on the delivery and evaluation of studies is used to improve the field of study.

During the visit, information from SER was confirmed that the university carries out surveys addressed to students and graduates. The analysis of the answers contained in the surveys actually improves the educational process. It is very good that the synthetic results of the conducted surveys are published on the university's website. The evaluation team evaluates very well the area of the collection, use and publication of information on studies, their evaluation and improvement processes and outcomes.

3.7.4. Evaluation of the opinion of the field students (collected in the ways and by the means chosen by the SKVC or the HEI) about the quality of the studies at the HEI

The opinion of the students on the quality of the studies are collected by the National Student Survey (the NSA). In addition, at the end of the semester, students complete, in accordance with the decision of the KU Senate, an e-questionnaire. The obtained data is processed at the University and their results are published.

The system of conducting student surveys after each semester and year of study works properly. There is no need to change it. You just need to remember to systematically analyze the results obtained. As well as announcing decisions based on analyzes of conducted surveys.

Strengths and weaknesses of this evaluation area

Strengths:

1. The university has a quality management system (ISO 9001:2015), which allow more frequent study quality assessment than the visits of evaluation teams.
2. Public and open vast information on studies (study evaluation and improvement processes and outcomes, opinions of external and internal stakeholders, etc.) is available to the academic community.

Weaknesses:

1. Exchange of views on study plans in a bilateral setting may not provide an objective opinion of the whole community of employers'.

IV. EXAMPLES OF EXCELLENCE

'State-of-Art' research facilities within marine engineering/combustion-engine-lab and lab for emissions measurements, which is important for assessment of technology development as well as social impacts of emissions from maritime operations. The research infrastructure was both located physically at the university marine research lab, as well as a mobile lab integrated into a van – including an aerial drone emission measurement unit. These are important tools for assessment of the green-shift in shipping, and also for the urban community context where shipping activities are an integrated part of the community - as linked to their 'sustainable harbour cities' initiative with European partners.

We see this as an example of 'excellence', although the technology and research infrastructure is 'state-of-art' and as such also achievable by others. However, in the domestic context, and also in the European research network within this research context, these are examples of research infrastructure and use that have an impact in the European research network collaboration, and could also have this in a domestic context, for instance in collaboration with the Lithuanian Maritime Academy - which is in the same field of study and research.

V. RECOMMENDATIONS

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Intended and achieved learning outcomes and curriculum	<ol style="list-style-type: none"> 1. Continue to adapt learning outcomes to the needs of the business sector. 2. Improve internationalisation by aligning intended learning outcomes with the proposals of the International Association of Maritime Universities (IAMU).
Links between science and studies	<ol style="list-style-type: none"> 3. There is a potential in increasing the effort to bring more students into formal research activities and raise the level of students' awareness and insight in research. The study program has a good resource basis for this with improved 'researcher : teacher' balance, very good research infrastructure, as well as a good research network both domestically and internationally. 4. The formal introduction to research work should be increased in the study plan at the undergraduate level. Assessing mandatory versus voluntary research activities, and also individual versus student group based research activities. 'Lead researcher' roles among both faculty and students could also be assessed, to support 'follower' effects in research activity.
Student admission and support	<ol style="list-style-type: none"> 5. The Lithuanian version of the university web page has a lot more information than the English version, which might give some disadvantages for the foreign students, the update of the page should be considered. 6. Step up efforts to encourage and promote student academic mobility.
Teaching and learning, student performance and graduate employment	<ol style="list-style-type: none"> 7. To provide specific data on numbers of cases related to academic integrity, discrimination, and student appeals

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Teaching staff	<p>8. The requirements for English level teaching should be increased from the B2 to the C1 level. About 85% of the lecturers are certified at the B2 level or higher in English; however, it would be advantageous if all lecturers were certified at the B2 level or, preferably, at the C1 level or higher. Furthermore, the requirements for teaching in English could be increased from the B2 to the C1 level. Lectures should be offered online. This may help to reduce the drop out ratio.</p> <p>9. Measures are to be taken to ensure that staff members actually have enough time to take advantage of training offered by the University to enhance their competences. The number of outgoing teachers is on a low level and should be increased. The panel strongly recommends promoting mobility of teachers. The associate and full professors should increase their research activities by participating in national and international projects (e.g., EU funded research projects). Furthermore, the number of articles published in international peer reviewed journals (Q1,Q2) is on a low level, and this level should be increased.</p>
Learning facilities and resources	10. Continue to develop learning facilities and resources.
Study quality management and public information	11. University should consider creating a body composed of a wide range of employers, which would develop proposals for study plan that would suit the entire employer community.

VI. SUMMARY

In terms of the learning outcomes the Department of Marine Engineering has a clear understanding of social change. The team works consistently to develop their study programmes. The content and level of objectives and learning outcomes of both the first and the second cycle study programmes are relevant to the labour market. The objectives, learning outcomes, teaching/learning and assessment methods of the first and the second cycle programmes are well aligned with the requirements for the 1st and 2nd cycle study programmes and thus provide consistent development of students' competencies. In addition, students have the right to study according to an individual study plan. The final thesis meets the requirements of the 1st and 2nd cycle study programmes.

The link between science and studies is based upon a research focused group of faculty, where the researcher competence among the lecturers are increasing and the publication level is increasing, access to very good research infrastructure and research network – through international academic network and social partners, and a doctoral programme with candidates acknowledged for theses of high quality and relevance. Students are encouraged to take part in research activities, and an incentive system is in place to support this. In their study plan, undergraduate students have no formal researcher education, but the students in the graduate programme have two formal study subjects addressing research and innovation work in their first and third semester. The formal introduction to research work should be increased in the study plan at the undergraduate level. Dissemination activities are also available, both as publication at conferences or in scientific journals (with supervisor), in student (design) competitions, and as thesis submitted for public prize evaluations – for instance several students 'awarded the Klaipeda Municipality Prize', further student 'awarded by the Klaipeda Industrialists' Association'. The share of students participating in research should be increased, and student-lecturer (-researcher) co-publishing could act as a measure.

The admission process is well presented in all languages in KU website, which is very informative and easily accessible for Lithuanian students, yet the English version of the KU webpage has less information than the Lithuanian version, which is in need of Universities attention. Despite that, the expert panel states that the admission procedures are transparent and well communicated. The procedure for recognition is fair, well organised and appears to work well in practice. The university provides many Erasmus+ opportunities for students, not only for studies, but also for internship, yet only a few students tend to use the mobility opportunities. University could step up its efforts to encourage and promote student mobility. Students are given all the information about scholarships, studies, and mentors during the first study year. They also are provided with all the psychological, spiritual, career support they need. The expert panel found that the university has a system in place to inform and to advise students regarding any studies questions.

The expert panel members agreed that the number of teaching staff and their qualifications and competences within their field study programs are adequate to achieve the learning objectives. The panel judged the teaching collective to be good to very good. Furthermore, the panel mem-

bers agreed that there was a robust collegiality and a shared commitment to the marine engineering field fostered by their institution. In addition, the expert panel found that the level of communication and exchange with foreign countries as well as the opportunities for improving competencies of teaching staff are good. However, the number of outgoing teachers is on a low level, and this level should be increased. The panel strongly recommends promoting the mobility of teachers. Furthermore, the panel suggests that the teaching staff benefit from longer time period sabbaticals for research and teaching. Measures are to be taken to ensure that staff members actually have time to take advantage of training offered by the University to enhance their competences. The requirements for English level teaching should be increased from level B2 to level C1. It would be beneficial if all lecturers are certified at the B2 or, preferably, the C1 level or higher. Finally, teachers should be motivated to increase the number of articles published in international peer reviewed Q1/Q2 journals.

The infrastructure for teaching and learning, including auditorium, office and study spaces, library, computer rooms, software, electronic and digital resources, are excellent, adequate in all aspects and up to date. There is good access to international research through the e-library.

The evaluation team positively assesses universities' possession of the ISO 9001:2015 quality management system. The ISO system allows for frequent assessment of the quality of studies.

Expert panel chairperson signature:

Prof. dr. Bettar O elMoctar

