CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT

STUDY FIELD of MARINE ENGINEERING (E07)

at Lithuanian Maritime Academy

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Study Field Data

Title of the study programme	Marine Engineering	Marine Electrical and Electronic Engineering
State code	6531EX045	6531EX046
Type of studies	College	College
Cycle of studies	First	First
Mode of study and duration (in years)	Full time (4 years) Part time (till 6 years)	Full time (3,5 years) Part time (till 5 years)
Credit volume	240 ECTS	210 ECTS
Qualification degree and (or) professional qualification	Professional bachelor degree in engineering, qualification of Ships Mechanic, Engineer	Professional bachelor degree in engineering, qualification of Electro-Technical officer, Engineer
Language of instruction	Lithuanian, English, Russian	Lithuanian, English, Russian
Minimum education required	Secondary education	Secondary education
Registration date of the study programme	2009-08-31, Nr. 1-73	2015-06-09, Nr.SV6-27

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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 5, 2023.

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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:

- Annex 1A. Study programme Marine Engineering study plan (full-time)
- Annex 1B. Study programme Marine Engineering study plan (part-time)
- Annex 1C. Study programme Marine Electrical and Electronic Engineering study plan (full-time)
- Annex 1D. Study programme Marine Electrical and Electronic Engineering study plan (part-time)
- Annex 2. Examples of the study subjects description
- Annex 3. List of final thesis 2019-2022
- Annex 4. List of core teaching staff

1.4. Background of Marine Engineering study field in the Lithuanian Maritime Academy

The following information is based on the self-evaluation report (hereafter SER) of the Lithuanian Maritime Academy (hereafter LMA) and the information provided during the on-side visit. The SER was carried out by a self-evaluation team consisting of eleven members (one associate professor, four lectures, two students, two graduates, and two social partner representatives).

The Public Institution Lithuanian Maritime Academy (LMA) is a state higher education institution of the Republic of Lithuania. According to the Classification of Economic Activities, the main field of LMA‘s activity is 85 – Education; the central area of activity is 85.42.10 Higher non-university education. LMA has autonomy and accountability to the public, the founders, and the participants of the legal entity. The collegiate governing bodies of LMA are the Council (strategic management) and the Academic Council (academic affairs), with the Director as the sole governing body1. The LMA, founded in 1948 as Klaipeda‘s Maritime School, is the unique higher education institution in the country that trains highly qualified maritime and inland waterway transport professionals for a successful professional career in the national and international waterborne transport sector, basing studies, non-formal education and continuing vocational training on maritime culture and traditions, democratic values, responsibility, and leadership.

The results of the external evaluation of LMA organised by the SKVC in 2021 are positive, and LMA is accredited for seven years. LMA is accredited by the Lithuanian Transport Safety Administration (LTSA), positively evaluated by the European Maritime Safety Agency (EMSA) in 2019, quality management system is certified for compliance with the standard ISO 9001:2015. One external and one internal audit are performed each year with a follow-up.

The LMA offers 6 study programmes in the fields of marine technology, marine engineering, information systems and management. The study programmes *Marine Navigation*, *Marine Engineering*(SP M) have been running since 1948 and *Marine Electrical and Electronic Engineering* (SP E) since 2015.The above-mentioned seafarer training programmes, together

with the programmes *Port and Shipping Management* (since 2002), *Maritime Transport Logistics Technologies* (since 2012) and *Shipping and Logistics Information Systems* (since 2020), which prepare specialists in other areas of the maritime transport sector, form a traditional ecosystem of maritime education and training (MET) in the LMA. This model of maritime studies is widespread around the world, e.g. in the Netherlands, Finland, the United Kingdom, Denmark, Latvia, Estonia, Poland, etc.

768 students were enrolled at LMA in October 2022, including 219 full-time international students. The LMA employs 69 lecturers, 30 instructors, and 35 specialists of the administrative staff. The retrospective portfolio of programmes at LMA consists of 14 programmes, which trained a wide range of engineering specialists in the maritime transport sector – shipbuilding and repair, ship refrigeration, radio communication, electronics, etc. The programmes were *Ship Radio and Navigation Equipment* (from 1955 to 1977), *Ship Electronics Aids* (from 1999 to 2003). The electrical service on board was carried out by ship engineers, and from 1995 to 2010, electrotechnical specialists without a maritime degree could work on board. In 2010 the STCW with Manila Amendments restored the certificate of competence of electro-technical engineer and the position of the ship‘s electro-technical officer, which had been abolished in 2003, enabled the creation of SP E in 2015 and its successful implementation in the LMA to date. During the whole period of operation of the LMA, more than 14,000 specialists have been trained, including about5,200 marine engineers’ officers and about 100 marine electro-technical officers.

SP M and SP E provide state-regulated qualifications that meet the requirements of national and international legislation regulated seafarer training. The SP E programme covers the competency standards for an Electro-technical Officer which is an officer qualified in accordance with the provisions of regulation STCW A-III/6. SP M covers the minimum competency standards in the STCW A-III/1, Officers in Charge of an Engineering Watch in a manned engine-room or as designated duty engineers in a periodically unmanned engine-room (operational level) and the mandatory minimum competencies requirements in STCW A-III/2, Chief Engineer officers and Second Engineer officers on ships powered by main propulsion machinery of 3,000 kW propulsion power or more (management level).

The primary study activities of the LMA are carried out by 6 groups of study programme lecturers, managed by Head of the study programme, who are responsible for the quality of the content and delivery of the studies. The study programme groups cooperate with academic and study service units: the Study Department for the organisation and administration of studies: the Science and Study Innovation Department for research and development and projects; the International Relations Department for mobility; the Seafarers Training Centre (STC) and the library for study resources; and the Career and Communication Department for publicity and events. The Personnel, Accounting, and Economy Units carry out economic and administrative functions.

Since 1994 cooperation with the Lithuanian Naval Forces Training Centre and since 2012 in cooperation with General Jonas Zemaitis Lithuanian Military Academy in the LMA is carrying out training programme for commanders of junior rank officers for naval forces. SP M and SP E provide equal opportunities for men and women to pursue careers in the

shipping and maritime transport sector, enable seafarers after completion their seagoing careers to continue their activity ashore and ensure the position of the LMA in the MET area in the Baltic Sea region and worldwide.

II. GENERAL ASSESSMENT

Marine Engineering study field **and first cycle** at **Lithuanian Maritime** Academy 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	4
4.	Teaching and learning, student performance and graduate employment	3
5.	Teaching staff	3
6.	Learning facilities and resources	3
7.	Study quality management and public information	4
	Total:	24

*

1 (unsatisfactory) - the area does not meet the minimum requirements, there are fundamental shortcomings that prevent the implementation of the field studies.
2 (satisfactory) - the area meets the minimum requirements, and there are fundamental shortcomings that need to be eliminated.
3 (good) - the area is being developed systematically, without any fundamental shortcomings.
4 (very good) - the area is evaluated very well in the national context and internationally, without any shortcomings;
5 (excellent) - the area is evaluated exceptionally well in the national context and internationally.

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 (not applicable to HEIs operating in exile conditions)

The study of Marine Engineering is oriented towards the professional requirements of the labour market. It meets the requirements imposed on European and Lithuanian higher education, as well as the requirements imposed on maritime professions by international legal acts, actively cooperates with social partners and enhances students' general skills.

A need for specialists in this field has arisen due to the emergence of autonomous ships. Marine Engineering covers the operation, improvement and maintenance of self-propelled and non-self-propelled water transport vehicles, their electrical, electronic and automated propulsion systems, on-board systems and hydrography. The degree is recognized in the international labour market as a qualification regulated by IMO conventions.

Upon graduation, a higher tertiary education and engineering qualification is obtained:

– Study programme marine Engineering Specialisation Operation of Marine Propulsion Systems entitles the holder to obtain from the LTSA the Certificate of Competence (CoC) of Technical Officer of the Watch for ships with main propulsion machinery of 750 kW and above and to perform the functions of a marine engineer at operational and management level in the following areas: marine machinery, electromechanical, electronic and control systems, maintenance and repair, control of ship operations and supervision of people on board. After completing the training courses approved by the LTSA and passing the examinations to obtain the CoC, the graduate attains the rank of Chief Engineer (STCW A III /1, A- III /2);

– Study programme Marine Electrical and Electronic Engineering entitles the holder to obtain the certificate of competency of an electro-technical officer on board ships with a main propulsion engine of 750 kW and above, entitled to perform duties at operational level in the following fields: Electrical engineering, electronics and control equipment, maintenance and repair, control of ship's operations, supervision of persons on board (STCW A-III /6).

The panel found that the LMA has a clear understanding of social change. The team works consistently to develop their programmes of study. The content and level of objectives and learning outcomes of the first cycle study programmes are relevant to the labour market. The extensive cooperation with social partners is further evidence of the appropriate focus of the objectives and learning outcomes. LMA's study programmes prepare its graduates very well 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

The objectives of SP M and E are in line with the vision and mission of the LMA and its strategic goal to educate highly skilled maritime and inland waterway professionals through higher education studies, non-formal adult education and professional development that meet national and international requirements for quality studies, seafarer training and the results of the latest scientific research. The LMA strategy is in line with EHEA qualifications, mobility, internationalisation, recognition of degrees and qualifications, provision of a Diploma Supplement and promotion of partnerships with higher education institutions.

There is good alignment between the objectives and outcomes of the study programmes and the strategy of the LMA.

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 study programmes Marine Electrical and Electronic Engineering, Marine Engineering (Specialisation power plants) meet the legal requirements for higher education study fields for first cycle college studies obtaining Professional bachelor degree in engineering, qualification of Ships Mechanic, Engineer and Professional bachelor degree in engineering, qualification of Electro-Technical officer, Engineer.

The volume of one year studies is 60 credits, and part-time studies is 40 credits.

Marine Electrical and Electronic Engineering is a 3,5 year full-time or a 5 year part time programme and equates to a total of 210 ECTS credits, of which 12 credits are allocated to the preparation of the final thesis.

Marine Engineering Specialisation 1 Operation of ship power equipment is a 4 year full time or a 6 year part-time programme and equates 240 ECTS credits, of which 11 credits are allocated to the preparation of the final thesis. Marine Engineering Specialisation 2 Repair of ships and ship's propulsion power plants is a 3 year full time programme and equates 180 ECTS credits, of which 9 credits are allocated to the preparation of the final thesis with final examination (LMA Marine Engineering SER, Table 3, p. 13).

The content of the SP M and E is reviewed once a year in line with the LMA Regulations on Studies, the Rules on Preparation, Update and Certification of Study Subject (Module) Descriptions, discussed with the programme lecturers, and considering the students' feedback

and recommendations of social stakeholders. The final decision is taken at a hearing of the Study Programme Supervisory Committee (SPSC) (LMA 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 Engineering study program compliance to general requirements for first cycle study programmes of College level (professional bachelor)

Criteria	General legal requirements	In the Program*
Scope of the programme in ECTS	180, 210 or 240 ECTS	240 / 180 ECTS
ECTS for the study field	No less than 120 ECTS	223 / 163 ECTS
ECTS for studies specified by College or optional studies	No more than 120 ECTS	114 / 58 ECTS
ECTS for internship	No less than 30 ECTS	72 /36 ECTS
ECTS for final thesis (project) with final examination	No less than 9 ECTS	11 / 9 ECTS
Practical training and other practice placements	No less than one third of the programme	53% / 50%
Contact hours	No less than 20 % of learning	47% / 51%

*specializations: Operation of ship power equipment / Repair of ships and ship's propulsion power plants

Table No.2. Marine Electrical and Electronic Engineering study program compliance to general requirements for first cycle study programmes of College level (professional bachelor)

Criteria	General legal requirements	In the Programmes
Scope of the programme in ECTS	180, 210 or 240 ECTS	210 ECTS
ECTS for the study field	No less than 120 ECTS	193 ECTS
ECTS for studies specified by College or optional studies	No more than 120 ECTS	66 ECTS
ECTS for internship	No less than 30 ECTS	72 ECTS
ECTS for final thesis (project)	No less than 9 ECTS	12 ECTS
Practical training and other practice placements	No less than one third of the programme	57%
Contact hours	No less than 20 % of learning	43%

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

The SER contains an extensive and well organised section that details the aims, learning outcomes, teaching/learning and assessment methods.

Annex 2 demonstrates that learning outcomes are aligned with both study methods and clear assessment strategy. The learning outcomes are divided into: 1) knowledge and its implementation, 2) specific (engineering analysis and design) skills 3) research skills and practical activities and 4) personal skills. The learning outcomes are well formulated and specific enough. Study methods are detailed to a great extent and are linked with assessment methods (Annex 2 Study subject descriptions). A variety of teaching/ learning methods is

applied, such as: theoretical, interactive, and engaging lectures, applied exercises, critical thinking, integrated teaching of subject content and foreign language, analysis of scientific and practical literature, and content analysis of national and international legislation, etc. (LMA Marine Engineering SER p.14)

SER states that the formative, cumulative and summative assessment are applied: a survey orally and in writing, testing, examination, demonstration of practical skills working with electronic simulators, defending laboratory works, review of literature and information sources, reports, case study, portfolio method, analysis of problematic situation, project, research work, course work, filling the seagoing training log book and preparation of its report, preparation of scientific applied research works and their presentation in conferences, examination in oral and written form, demonstration of foreign language skills in conferences, preparation and public defending of the Professional Bachelor's FT, FQE. Study achievements are evaluated by excellent, typical and threshold levels, assigning the grades of 10-grade system for outstanding (9 and 10), typical (8 and 7), and threshold (6 and 5). SP M specialisation 1 studies are finished with the FT and FQE; specialisation 2 studies are finished with the FT (LMA Marine Engineering SER p.15)

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, it is also good to see that there is a formal process in place to ensure the transition from the first to the second cycle through the cooperation of the LMA and VILNIUS TECH.

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 the 1st year, the basic subjects are taught to arouse the students' interest in their future professional activity. In the 2nd year, the design and operation of ship mechanisms are studied in SP M. Students can choose the specialisation SP M. SP In the second semester, students study the operation of electrical ship mechanisms in more depth. Professional practise is carried out at shipyards, sea-going vessels or in the navy. In the 3rd year SP M students deepen the specialisation subjects, SP E – the subjects for the operation and maintenance of electrical ship parts, study the compulsory special qualification subjects required for obtaining a marine rank; they start the final training at sea; SP M specialisation 2 students carry out the final training, prepare and defend the FT and finish their studies. The 4th year students mainly study subjects in electronic simulators, prepare and defend the seagoing training reports, FT, and take the FQE.

Students can select the SP M specialisation. Students can choose the place for their final seagoing training. If during their studies it is found that a student cannot work on board seagoing vessels, they can change specialisation and choose their career in shipbuilding and repair.

Optional Subjects in study programmes also allow for individualisation of studies and development. Volume of optional studies in ECTS credits is 56 for SP M Specialisation 1, 46 for SP M Specialisation 2, and 77 for SP E (Annexes 1 A, B, C, D)

The panel believes that students have a good choice of subjects and modules to ensure their development while providing flexibility for individual adjustments, as needed.

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 study programmes concerned offer opportunities to personalise the study experience. Students can choose a full-time or part-time study plan to combine personal, professional and family interests. SP M students are free to choose their specialisation, and if during studies it becomes evident that a student cannot work on board seagoing ships, he can change the specialisation and choose a career in the sector of shipbuilding and repair. Students can choose elective courses, the place of the professional training/practice, the topic of their final thesis, complete their studies in a shorter period, carry out their research, participate in student conferences and scientific projects. Students have the opportunity to follow personalised study plans by choosing the courses. In addition, when their personal circumstances change, students can adapt their studies by switching between study programmes and from full-time to part-time studies. In justified cases, a personal examination appointment can be arranged. Contact lectures are combined with consultations, individual and distance learning.

Students have the right to study according to an individual study plan. Upon justified request of the student, a personal study plan is drawn up to meet their needs. Their studies are governed by the LMA study regulations. Students may opt for a full-time or a part-time study plan to combine personal, professional and family interests.

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

In the study programme Marine Engineering Specialisation 1 Operation of ship power equipment the load of final thesis is 11 ECTS, Marine Engineering Specialisation 2 Repair of ships and ship's propulsion power plants the load of final thesis is 9 ECTS, in the study programme Marine Electrical and Electronic Engineering the load of final thesis is 12 (SER Marine Engineering LMA p. 13). The final thesis is prepared in the last semester (SER Marine Engineering LMA p. 14). The SP M and E final examination is made up of the final theses (FT) and final qualifying examination (FQE). However, the specialisation 2 of SP M does not have FQE. The rules for preparing and defending the FT are explained in the General Requirements for Written Work for LMA Students and in the Methodological Instructions. The FT defence committee composition is in line with the Requirements of the Description of the study field and are written in the LMA Study Regulations. It consists of 5 members; more than half of the members of the FT assessment board are practitioners (seafarers, ships engineers or electrical engineers etc.) of the study field. Student selects the supervisor and specifies the subject of FT,

presents the results in methodical seminars and preparatory defence and, after receiving permission, defends it publicly. An associate professor or a lecturer may carry out the supervision of the preparation of the FT. The variety of themes that can be chosen is proven by the list of the final theses from 2019 to 2023 (Annex 3). Students who have completed the study programme and have prepared a FT can publicly defend the FT by order of the Director of the LMA (SER Marine Engineering LMA p. 15). SP M specialisation 1 studies are finished with the FT and FQE (STCW); specialisation 2 studies are finished with the FT. FQE can be taken by students having accomplished SP M and E complying with STCW Convention and approved by LTSA and having collected not less than 2/3 seagoing service time, that is necessary for the award of the first CoC or who have the seagoing service time approved according to the Description of Partial Studies Outcomes Crediting at LMA.

The panel finds that the final thesis meets the requirements of the study programme. 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 study programme Marine Engineering provides a state-regulated qualification that meets the requirements of national and international legislation governing the training of seafarers.
2. A formal process in place to ensure the transition from the first to the second cycle of studies.
3. There is a good choice of subjects and modules to provide for individual adjustments.
4. Students may opt for a full-time or a part-time study plan to combine personal, professional and family interests.

Weaknesses:

1. N/A

3.2. LINKS BETWEEN SCIENCE (ART) AND STUDIES

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

The Maritime Academy (LMA) has a large number of contracts with development (SER, 40), which are termed as R&D contracts, but are mostly of requalification character. The large number of such contracts is an indicator of the close and good basis for collaboration between the LMA and their social partners, and is also an important source of funding (SER, Fig. 1a). However, there are no research projects documented acquired in the period (SER, Table 4).

International research collaboration is documented with researchers from other domestic and international universities (SER, 49), however unbalanced across the members of the faculty (17%). A special collaboration scheme with France and French institutions, including joint arrangement of conferences, are established (SER, 55). Erasmus + programmes are used as supporting mechanisms for financing of international research collaboration (SER, 54).

Financing for research activities has been gained from domestic and EU sources, including Erasmus+ and Interreg (SER, 48). The financing covered programme development, research mobility, and research infrastructure. This was both restated and shown during the site visit. In addition, a financial incentive system for remuneration of publication and conference expenses, was established based upon historical publication results.

Two (or three) out of seven strategic indicators are at or above the given strategic threshold. The strategic indicator 'ratio of scientific publications in international databases to the total number of publications' was low in 2020 (start pandemic), but on par with the strategic threshold in other years.

The publications number are increasing throughout the assessment period towards a robust level, with a broad authorship among the faculty, and where The ratio of common publications between the students and lecturers is a strong indicator. A point of improvement could be to balance out the fact that one lecturer stands for 55% of the publications (SER, 41).

'R&D contracts' are an important part of funding of LMA activities, and do also act as a strong measure of collaboration between the LMA and the social partners.

A new research and innovation group, with a formal leader, has recently (2023) become part of the formal organisational structure of the LMA. The new research and innovation group is a constructive measure to further strenghten the research focus of the LMA which the assessment committee sees as a positive development, but cannot make a formal assessment of as it is made after the assessment period. This is a development in its infancy, and the results of this have to be proved over time.

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

The SER describes how R&D activities are both relevant to, and contributes to further development of the programme (SER 45 and 46). Both content of courses and the methodological side are addressed and updated, for instance with the multi- and interdisciplinary aspects of contemporary engineering solutions within the technology field (SER 47).

The study plan covers a module of 'methodology of applied engineering research and projects', preparing the students for applied research tasks and the final thesis (SER, annexes 1A to 1D). The module is given in the fourth semester, which is half-way in the full-time study.

The library and library services had access to relevant and updated research and development publications of relevance to the field of study. A good series of publications were available also during the site visit.

The site visit supports the SER description of how the latest developments in science and technology is brought into the studies in a constructive way. Both the study plan – and especially the 'methodology of applied engineering research and projects' module, and the process of updating the study subjects, secures the link between the content of the studies and the latest developments in science and technology.

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

The study subject module 'methodology of applied engineering research and projects', introduces the students for applied research tasks and the final thesis (SER, annexes 1A to 1D). The module is given in the fourth semester, which is half-way in the full-time study.

The students are conducting applied research projects in their final thesis research work. The topics addressed, researched and documented in the final thesis shows relevance to both field of study and applied research (SER, Annex 3).

The students are on a voluntary basis encouraged to prepare research publication projects during lectures; 'advanced students' encouraged to join RCL projects, collaborate with lecturer(s); encouraged to present results of final thesis at conferences or in publications (SER, 57). This is backed by financial incentives for students that participate (SER, 58). The quantitative numbers show an increase in student involvement in research over the period, but the numbers are very low (SER, 59).

During site visit, both lecturers and students gave examples of methods of how they could get involved in research, as well as the financial incentives that supported this.

The module of 'methodology of applied engineering research and projects' in the study plan, is both a formal introduction to the tools of communication, methodology, and planning and control of research and research project work, as well as a first and formal introduction to research for the students.

It is the committee's understanding that the students are well aware of both the opportunities to become involved in research activities, as well as the financial incentives that support this. Also, the relative high score on teacher/student co-publishing, could act as an indicator that the teachers see and use student based research as an important research publication approach.

Strengths and weaknesses of this evaluation area:

Strengths:

1. Research network – domestic and international academic network and links to industrial partners.
2. Project based support for international collaboration through mobility programmes and joint conferences.
3. Methods for bringing students into research – the applied research study model, recruitment efforts and incentive system.
4. Rather high share of student and lecturer common publications.

Weaknesses:

1. Number of students taking part in research compared to the volume of students and their interest in and practice of co-publishing with teachers.

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 applicants to the Academy, which are presented in Lithuanian, English and Russian, in the LMA website (https://lajm.lt/lt/). The process of admission for Lithuanian citizens 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 to LMA approved by the LMA Academic council prepared in accordance with the normative documents currently in force. Under this procedure, Lithuanian 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 "Marine Electrical and Electronic Engineering" and "Maritime Engineering" study programs are calculated from Lithuanian state exams or the annual high school diploma grades.

The application system for international students is straightforward as they apply through google scripts link, which is provided on LMA webpage. International students must submit a copy of their passport, attach a certificate of their full secondary education and personal statements.

During the last four years, the number of the students enrolled in the "Marine Engineering" study program was stable (38 students in 2019, 38 in 2020, 29 in 2021 and 49 in 2022). The "Marine Electrical and Electronic Engineering" study program attracted a smaller number (13

students in 2019, 18 in 2020, 11 in 2021 and 30 students in 2022). Over four years the total number of students who signed the contracts were 217.

The admission process is well presented in all three languages.

The LMA website is very informative and easily accessible for Lithuanian, English and Russian speakers. Yet the Lithuanian version of the Academy webpage is newer than English and Russian Language versions. Despite that, the expert panel states that the admission procedures are transparent and well communicated.

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

By the Order of the Ministry of Education, Science and Sports LMA was granted the right to carry out the academic recognition of qualifications attributed to the Ukrainian education system that grant the right to higher education (secondary education) during the admission of persons to short-term and college studies in 2022. Every year, the LMA rules for the admission of citizens of foreign countries to non-Lithuanian-language and self-funded first-cycle studies are updated and approved, which set out the guidelines for the assessment of qualifications acquired abroad, who they apply to, the documents to be provided and the assessment process. Partial studies are regulated by the Description of the procedure for crediting partial study results at LMA, as evidenced in SER. The learning outcomes of a person, who has studied in another Lithuanian or foreign higher education institution under a contract, shall be credited by converting the received evaluations to ECTS and counting according to the pre-agreed equivalents. Partial studies for students, who went to study under ERASMUS+ programme, after starting studies in higher courses are credited at LMA.

The procedure for recognition is fair, well organised and appears to work well in practice. Students' feedback during the visit was good, the administration is easy to talk to, foreign students seemed happy with the teaching staff and the help from the Academy.

3.3.3. Evaluation of conditions for ensuring academic mobility of students

All LMA students can take advantage of Erasmus+ programme opportunities provided by the Academy: To go for a study exchange, for half a year or to go study in partner universities of LMA, for a full year. Academy cooperates with 57 higher education schools, scientific and research institutes in Europe member states, Turkey and Norway under Erasmus+ programme with 46 partners and bilateral contracts and agreements with 11 partners. Also, students can go for an Erasmus+ internship lasting from 2 to 12 months. During 6 months of professional final practice and after graduation, the Academy provides Erasmus+ internship opportunities.

Over the years 2019-2022 87 LMA students went for studies and practice, 38 took part in Erasmus+ internship, of which 31 students were marine engineering and marine electrical and electronic engineering.

All information about the student mobility opportunities is published by the International Relations Department that provides information on studies and internship abroad, presents higher education institutions, organizes Erasmus+ selection competitions, Erasmus+ information events, during which students are informed about Erasmus+ mobility procedures and selection criteria.

The Academy provides many Erasmus+ opportunities for students, not only for studies, but also for internship. Not a lot of students tend to use the mobility opportunities, but those of who decide to go, the feedback is very positive. The only negative side is that there is no official information of the financial support for students who go to the Erasmus+.

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 Academy 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. The Academy provides all the information about workplaces who seek students for internships or work. LMA also keeps track of the students who receive support, and the data presented in the SER indicates that a relatively low number of students seek assistance from the university.

Students are provided with all the psychological help they get. They were happy about the amount of financial aid provided by the Academy and the stakeholders. They were also grateful for price of the housing.

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. The most common one is through email provided by the Academy. All the information related to lectures are changed on Google Cloud or Google Calendar. The Academy allots 2 academic hours per week for student consultations. Students can book consulting sessions (face-to-face and online) with the teachers, the time is placed on Google Calendar.

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. Academy 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 Academy webpage is newer than English and Russian Language versions, which gives some disadvantages for the foreign students.
2. Information on complaints and appeals is difficult to access on the Academy's website.
3. Not a lot of students use Erasmus+ mobility opportunities.

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 have the opportunity to study full-time as well as part-time. They often work on ships and improve their qualifications at university. Therefore, the Maritime Academy has adapted the forms of studies to their needs. During studies, classic teaching methods are used: lecture, laboratory, exercises, seminars. Due to students' work, it is possible to create an individual study plan. The individual study plan takes into account the learning outcomes achieved by students. More than 50% of self-education is planned during the entire course of study. In SER, it was generally described that all programs of study are realized in the classroom, and additionally students' individual works were described in the syllabus of the subject. Graduates of maritime engineering studies have the opportunity to continue their studies in master's studies. LMA, together with Vilnius Gediminas Technical University, launched master's studies in transport engineering and maritime transport engineering and logistics. In addition, students can study at other universities, for example: University of Klaipėda or Maritime University of Technology in Szczecin (Poland).

During the visit to the Maritime Academy, it was confirmed that typical teaching methods are used, which are adapted to the specificity of the field of study. Classes are also conducted in a hybrid form, for students present at the classes and for those who are undergoing maritime internships at the same time. The methods of self-education used, for example individual projects and direct contact with teachers, stimulate students to acquire knowledge during their studies. Learning outcomes are achieved in a way typical of European universities. So experts state that the teaching and learning process warrant students to achieve the intended learning outcomes.

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

The SER doesn't provide information on how buildings on campus are adapted to the needs of people with special needs. There aren't students with special needs in the Maritime Engineering field of study, because the profession acquired after graduation doesn't provide employment opportunities for people with special needs. The university offers people with special needs studies in other fields that aren't related to work on ships.

Only information about financial assistance from the Government of the Republic of Lithuania for people unable to work or that are in an unfavourable financial situation is presented.

Students requiring additional support may receive financial support. In addition, students can also count on psychological help. The university operates a mentoring program according to the principle: "students for students". During the visit to the university, it was found that the academy is unfortunately not prepared to accept students with special needs. In the opinion of the university management, there is no such need because there are no special needs students at the university. However, in the opinion of the evaluation team, the need to adapt the university to the needs of this group of students should be considered. Adapting the buildings and expanding the educational offer for people who don't have to work on ships may in the future increase the number of people willing to study and develop this very important Academy for the Lithuanian maritime economy.

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

Students' progress is monitored at three levels: individual, study program, and university level. Progress monitoring is regulated by the QMS KVS-14 quality procedure. The assessment of the student's learning outcomes takes place during direct interactions between the teacher and the student during the semester. The analysis of intermediate and final grades is carried out at the level of field of study management twice per academic year. Identification of study programmes needed in the content is carried out by the Study Department of LMA.

In the SER was described Information on how students are provided with feedback on their performance and information on further planning of study progress.

During the visit to the university, the elements related to the individual student assessment were clarified. First, the student receives feedback from the teacher in the form of an assessment, which indicates the level of knowledge mastery. In addition, student evaluations are analyzed by the Study Program Committee. Meetings are held once a year. If there is a large discrepancy between the ratings in the group or the ratings are generally low, the SPC analyzes the situation and tries to develop corrective actions. If necessary, changes are introduced to the study program to improve students' ability to acquire knowledge.

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 (2017-2022). However, the information is incomplete because graduates work not only in Lithuania but also abroad. Therefore, information about employment is not complete and the university is not able to obtain complete information on this matter. The LMA tries to individually collect information about employment to make the data more complete.

Surveys of students and graduates are conducted. The surveys contain questions about the study program and the quality of studies. No information was provided on the involvement of external stakeholders in the student education process.

Graduates have good chances of employment after completing their studies, both on ships flying the Lithuanian flag and on ships of foreign flags. Conversations during the visit to the university confirmed that the university is not able to obtain full information about the employment of its graduates. This situation is the result of the fact that the labour market for graduates is international and therefore the Government Center for Strategic Analysis does not have complete information about graduates. Therefore, the creation of a monitoring system for the employment of graduates of LAJM, in order to collect the data on graduates working in foreign countries that are not collected by official agencies in Lithuania is necessary. According to the opinion provided by universities, it has extensive contact with employers and receives bilateral information on students' preparation for work, for example after completing their internships. Employers' representatives take part in the final exams and then can express their opinion about the graduates and the study program. However, the information provided by the universities was not confirmed during the meeting with social partners. Many employers' representatives participated in the meeting, and only one of them confirmed that they had the opportunity to talk about students' preparation for work once. This was after the end of professional practice. In the opinion of the evaluation team, communication with external stakeholders should be improved, e.g. by creating an advisory body within the university structures that could share its opinions about students and graduates. As well as it could have an impact on the study program.

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 were described in the LMA Statute and other academic documents.

At the beginning of studies, students are introduced to the requirements of academic honesty and the consequences of dishonest behaviour.

Teachers are obliged to respond to violations of academic ethics regulations. The Academic Council supervises compliance with the Code of Academic Ethics.

The implementation of policies to ensure academic integrity, tolerance and non-discrimination is consistent with university regulations in this area. During the visit to the university, the information contained in the SER was confirmed. It was presented that generally there were no incidents in this regard before the creation of the report. Similarly, from the time the SER was completed to the date of the assessment team's visit, no events were recorded in the area described. Very good relations between students and teachers' staff were confirmed by students during the meeting. Students from Lithuania, Belarus, Ukraine and Cameroon took part in the meeting.

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 application of the procedures for the submission and examination of appeals and complaints regarding the study process are described in the SER.

It was presented that in the years 2019-2022, the Academic Council considered one application to investigate a possible violation of academic ethics. The case ended with a motion for punishment.

The procedures for the submission and examination of appeals and complaints regarding the study process is described very detailed in universities' documents. Due to the lack of events described in this point, it cannot be stated whether the procedures presented are complete and respond appropriately to emerging threats. The procedures for the submission and examination of appeals and complaints regarding the study process is described very detailed in universities' documents.

Strengths and weaknesses of this evaluation area:

Strengths:

1. N/A

Weaknesses:

2. It is proposed to consider the possibility of better formalising employers' participation in the process of improving the study program, e.g. by establishing an Employers' Council;

3. The automatic anti-plagiarism system should be activated.

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 number of lecturers, qualifications and scientific, didactic, and professional competence of the lecturers working in the field of marine engineering seem to be adequate and sufficient to achieve the learning outcomes.

Lecturers of the LMA are recruited to the main teaching posts by public competition in accordance with the LMA Regulations on the Certification of Lecturers and Competitions for Teaching Positions. Non-competitive recruitment is for a maximum period of 2 years under fixed-term contracts. In both cases, the same special requirements for the posts of lecturers – associate professor, lecturer, assistant – apply, as set out in the job description and work regulations: to hold at least a Master‘s degree or equivalent higher education qualification, to be able to prepare the subject matter to be taught, and to be able to choose appropriate, student-oriented methods of teaching and studying, and methods of assessing achievements. Specific requirements relate to academic activity, a CoC of marine rank and seagoing service.

The number of lecturers working in the field of marine engineering varied depending on the number of students; the form of the study programme (FT, PT); the limitation of the number of students in the study subjects required by the STCW requirements and leading to a certificate of proficiency, such as Engine Room Resource Management, Proficiency in Survival Craft and Rescue Boats other than Fast Rescue Boats training programme; the language of instruction (Lithuanian, English); specific requirements for lecturers regarding maritime CoC and seagoing service; the introduction of changes and additions to study plans in 2020 – new specialisation Repair of ships and ship's propulsion power plants started. In 2019, there were 33 lecturers, in 2020 – 24, in 2021 – 28 and in 2022 – 36. The average length of service of lecturers at LMA is about 10 years (the overall average length of service of LMA lecturers is 18 years). The average teaching workload of lecturers in the field of marine engineering is 0,65 FTE.

The core of the marine engineering study field consists of 12 lecturers, including 3 PhDs in technology, 9 lecturers. The ratio of students to the average relative number of lecturers (FTEs) has varied slightly over the period analysed, ranging from 19 to 25 students per FTE (Table 21).

The composition of the teaching staff of the marine engineering field of study complies with the requirements for the composition of the teaching staff set out in the Descriptor of the Group of Study Fields of Engineering Sciences and the Descriptions of General Requirements for the Conduct of Studies. The qualifications of lecturers for both study fields meet the requirements for practical work experience, with 29 out of 36 or 80% of lecturers having at least 3 years of practical work experience in the subject area taught in 2022. 75% of the lecturers are certified at B2 or C1 level in English and 6 lecturers have passed the professional Marlins test for maritime English (C1-C2 level).

It was not clear from the report which international research projects were EU-funded and to what extent were they funded. Based on the report and the on-site visit, it is not apparent whether the teaching staff published articles in international peer reviewed journals (Q1, Q2).

The panel judged the teaching collective to be strong. All panel members agreed that the number of teaching staff and their qualifications and competences within the field study programs are adequate to achieve the learning objectives. Furthermore, there was a robust collegiality and a shared commitment to the marine engineering field fostered by their institution. However, among the teaching staff, the ratio of professors, associate professors, and lecturers with PhD degrees should be increased. about 75% of the lecturers are certified at the B2 or higher level in English. The expert panel recommends that all lecturers should be certified at the B2 or higher level. Furthermore, the research activities as well as the number of articles published in international peer reviewed journals (Q1, Q2) should be increased.

3.5.2. Evaluation of conditions for ensuring teaching staffs' academic mobility (not applicable to studies carried out by HEIs operating under the conditions of exile)

The academy offers favourable conditions for the development of academic mobility of teachers of marine technology study field. Their International Relations Department is responsible for this activity and cooperates with the heads of the study fields. In 2022, 87 agreements were concluded with foreign higher education institutions, whose activities are related to the fields of studies of the LMA. In the fall and spring semesters, teachers and students can apply for participation in teaching and learning, studies and internships. Common destinations of academic mobility: Latvian Maritime Academy, University of Rijeka and Split University (Croatia), Istanbul Technical University (Turkey), Romanian Naval Academy, N. Vaptsarov naval Academy (Bulgaria). So far, the applications of all those, who wish to participate in the academic mobility programme, are satisfied by allocating the planned Erasmus+ funds.

Members of the evaluation panel were impressed by the level of communication and exchange with other countries and by the mobility of many staff members participating in such exchanges – both in as well as outside Lithuania. The number of outgoing teachers improving their skills outside Lithuania has increased in the last years (17 in 2022). The application procedure has been made available, and it is transparent.

It is stated in the SER that 87 agreements were finalised with foreign institutions of higher education, whose activities are related to the fields of studies of the LMA. The expert panel members were also persuaded by the evidence documented in the SER and during on-site meetings, and they concluded that this is a strategic priority. Opportunities to enhance academic mobility are clearly given.

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

The academy Strategic Action Plan for 2021-2023 provides for the improvement and development of lecturers' professional, research, pedagogical and general (digital,

communication, intercultural, managerial, etc.) competences, Annual qualification improvement plan of LMA employees is drawn up and evaluated. At the individual level, each teacher is obliged to improve his/her qualifications systematically and can choose professional development events. All teachers are provided with equal conditions for improvement of qualifications, attending courses, conferences, and any travel expenses and participant fees are covered by the Academy. LMA staff are provided with an opportunity to participate in postgraduate studies – currently, 2 teachers are studying in the last doctoral course. It is also possible to choose doctoral studies in the field of transport engineering, coordinated by VILNIUS TECH University. Doctoral students are granted a study leave.

The expert panel members judge that the opportunities for improving competencies of teaching staff are excellent. The SER did not include data on the number of staff who took advantage of the training courses. However, according to the SER, each teacher is obliged to improve his/her qualifications systematically. The panel suggests that the teaching staff members benefit also from longer time sabbaticals for research and teaching.

Strengths and weaknesses of this evaluation area:

Strengths:

1. Strong practical work experience in the subject area.
2. Strong ethos and commitment to interdisciplinary approach.
3. Mobility with staff visiting other universities.

Weaknesses:

1. Relatively small ratio of professors, associate professors, and lecturers with PhD among the teaching staff.
2. Relatively Weak research and publication activities of teaching staff.
3. 75% of the lecturers are certified at B2 or higher level in English.

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

The physical infrastructure available for teaching, learning and training is mainly sufficient both in terms of size and quality as well as accessibility. The students of all study programmes have access to well-equipped spaces for individual and group work.

For marine engineering study field 50 classrooms in the main LMA building and in a laboratory building are installed. There are 28 classrooms in the main building for classroom work in large

and small groups: 1 –120-seat classroom, 6– 60-seat classrooms for stream lectures, 20– 30-seat classrooms, 1– 15- seat classroom, remote conference studio, 5 IT classrooms (in total 68 working places for students), electronic ship engine room simulator (12 working places, group work department), ship power plant and auxiliary machinery simulator (14 workplaces), machine parts laboratory, marine engineering laboratory with 3D printer and scanner, etc. The Seafarers Training Center has a Basic security laboratory, 3 special classrooms for computer-based training (Seagull modules) training, 2 places for special training in firefighting and lifesaving at sea, and 1 classroom for training of junior officer commanders. In the workshop located in the laboratory building students may have metalworking practice, also internal combustion, power plant, electrical engineering, robotics and other laboratories are installed. Students with movement disorders can access LMA facilities (LMA Marine Engineering SER, p. 27). However, the on-site inspection has shown that the appropriate access ramps are not installed..

The infrastructure for teaching and learning, including auditorium, office and study spaces, library, computer rooms, software, electronic and digital resources, are excellent, adequate and up to date, but access ramps for students with disabilities should be provided.

3.6.2. 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.

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. Access ramps for students with disabilities should be provided.

3.7. STUDY QUALITY MANAGEMENT AND PUBLIC INFORMATION

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

LMA has an ISO 9001:2015 quality management system. The ISO system was introduced in 2001. Moreover, the University has a Quality Book. The periodicity of the internal quality assessment is determined by these documents. Education quality assurance is implemented at four levels: global, EU, national and academic. The quality management system covers the main processes such as: planning, organization, administration and control of education, research works and consulting. The quality management system is well described in the SER. The structure of field study management and decision-making and the periodicity of internal assessment are described. The Deputy Director for Academic Affairs is responsible for the study process, the Head of the Study Department is responsible for the organization and administration of studies, and the Heads of the SP's are responsible for the quality of the content and implementation of programs of study.

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

A Study Program Supervisory Committee (SPSC) was established at the university. The committee includes representatives of the teachers' team, students (as internal stakeholders) and representatives of employers and graduates (as external stakeholders). Once a year, the committee evaluates the study program. If necessary, prepare proposals for changes to study plans. In addition, the Committee analyzes the results of surveys conducted at the University with students, graduates, and employers.

The information contained in the SER reflects the actual state of affairs at the university in terms of evaluation of the effectiveness of the involvement of stakeholders (students and other stakeholders) in internal quality assurance. However, the evaluation team suggests considering the possibility of creating an Employers' Council at the faculty, which could systematically assess the quality of the study plan and propose synthetic solutions to changes on an ongoing basis that will meet the expectations of the widest possible group of employers. The reason for this suggestion of changes is the effect of a meeting with external stakeholders, at which many people representing various companies and institutions operating in the labour market area related to the assessed field of study were present. However, only one person indicated that

they had been able to share their thoughts about the study program once in the past. This situation created the impression that external stakeholders are very interested in the graduates of the assessed field of study, but have no systematic influence on the study program.

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

The university conducts periodic surveys involving internal stakeholders (students, teachers) and external stakeholders (graduates and employers). The surveys comply with the quality procedures applicable at the university. Surveys are analyzed by the Head of Study Program. However, aggregated survey results are reported to the SPSC. Moreover, research results are discussed at meetings with internal stakeholders.

The university conducts surveys addressed to students and graduates. The results of these surveys are analyzed by teams in universities appointed for this purpose. However, it is proposed that the synthetic results of each survey (not only selected ones) be made available to the academic community, e.g. via a website or other way. In addition, the conclusions identified after the survey should be made publicly available.

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 university. At the end of the semester, students fill out questionnaires, in accordance with the Quality Book. The data obtained is processed by universities and their results are presented to interested groups. There is no information in the SER whether the university uses the National Student Survey app (the NSA).

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

Strengths and weaknesses of this evaluation area:

Strengths:

1. The university has a quality management system (ISO 9001:2015).

Weaknesses:

1. Not disseminating synthetic survey results and actions taken after their analysis on the university website.

V. RECOMMENDATIONS

Evaluation Area	Recommendations for the Evaluation Area
Intended and achieved learning outcomes and curriculum	Continue to adapt learning outcomes to the needs of the business sector. Improve internationalisation by aligning intended learning outcomes with the proposals of the International Association of Maritime Universities (IAMU).
Links between science and studies	A recommendation is to assess whether it should be made mandatory that a smaller number of assignments and deliverables in courses throughout the study have a research approach, with plan and dissemination according to scientific research approach and dissemination formats. Also, group based approaches with smaller groups of more than one student could do this together, so that the 'excellent students' could have a positive and constructive impact on fellow students and their understanding of and interest in research work, and also train their own (research) leadership skills. This could foster a better balance between 'thinking fast and slow' through the study. Lecturers could focus on building a 'student research cluster' around them, with given incentives, that could act as research mentors for other students. Co-publishing with the lecturers could be a measure (SI) for this. The new research and innovation group should be given a specific responsibility for this.
Student admission and support	The Lithuanian version of the Academy webpage is newer than English and Russian Language versions, which gives some disadvantages for the foreign students, this problem needs addressing. Information on complaints and appeals is difficult to access on the Academy's website, it should be made easier to find. Not a lot of students use Erasmus+ mobility opportunities, it should be considered: all the pros and cons of Erasmus+, as well as review the publicity itself, because it might be the main problem.
Teaching and learning, student performance and graduate employment	To consider the possibility of better formalising employers' participation in the process of improving the study program, e.g. by establishing an Employers' Council; The automatic anti-plagiarism system should be activated.
Teaching staff	The ratio of professors, associate professors, and lecturers with PhD degrees among the teaching staff should be increased. The expert panel recommends increasing this ratio. All lecturers should be certified at the B2 or higher level. Furthermore, the research activities as well as the number of publications in international peer reviewed journals (Q1, Q2) should be increased. The panel suggests that teaching staff members benefit from longer time sabbaticals for research and teaching.
Learning facilities and resources	Continue to develop learning facilities and resources. Improve conditions for students with special needs. Access ramps for students with disabilities should be provided.

Study quality management and public information	LMA should foster and develop cooperation with external stakeholders.

VI. SUMMARY

The LMA has a clear understanding of social change. The team works consistently to develop their programmes of study. The content and level of objectives and learning outcomes of the first cycle study programmes are relevant to the labour market. LMA's study programmes prepare its graduates very well to meet the demand of the public and private sectors in Lithuania and internationally. The objectives, learning outcomes, teaching/learning and assessment methods of the first cycle programmes are constructively aligned. Students have a good choice of subjects and modules to ensure their development while providing flexibility for individual adjustments, as needed. Students have the right to study according to an individual study plan. Upon justified request of the student, a personal study plan is drawn up to meet their needs. Their studies are governed by the LMA study regulations. Students may opt for a full-time or a part-time study plan to combine personal, professional and family interests. The panel finds that the final thesis meets the requirements of the study programme with relevant and diverse topics.

Links between science and study activities have a basis in a large number of development contracts, a domestic and international research network, researcher mobility, and the students contact work and applied research through their final thesis. Through the study, 'excellent students' are encouraged – through different means and incentives, to get involved in research activity and dissemination of this at conferences or in scientific journals. Collaborative research activity and dissemination jointly between students and lecturers is a positive strategic indicator, but with a higher potential. The students' preparation for conducting applied research in their final thesis, is based upon the study module covering methodology of applied research and projects in the field of technology. The focus is on the individual student. The subjects of the final theses show that the students are able to find and conduct relevant and researchable problems in an active and applied research context. Relevant infrastructure and material are available within the academy, through simulators, software, databases and publications, to prepare and support student applied research projects.

The LMA website is very informative and easily accessible for Lithuanian, English and Russian speakers. Yet the Lithuanian version of the Academy webpage is newer than English and Russian language versions, which is in need of the Academy's attention. The admission procedures are transparent and well communicated. Study program is very beneficial and necessary for the Lithuanian maritime market and students, both overseas and on shore. The procedure for recognition is fair, well organised and appears to work well in practice. The Academy provides many Erasmus+ opportunities for students, not only for studies, but also for internship. Not a lot of students tend to use the mobility opportunities, but those of who decide to go, the feedback is very positive. The Academy could step up its efforts to encourage and promote student mobility. Students are provided with all the psychological help they get, they

were happy about the amount of financial aid provided by the Academy and the stakeholders. The expert panel found that the university has a system in place to inform and to advise students regarding any studies questions.

The evaluation team understands that graduates have jobs that require good health. However, students with special needs should have the opportunity to study. Therefore, the evaluation team proposes to start activities aimed at adapting university buildings to the needs of these students. This may have a positive impact on increasing the number of students.

The panel judged the teaching collective to be strong. All panel members agreed that the number, qualification and competence of teaching staff within the field study programs are adequate to achieve the learning objectives. Furthermore, there was a robust collegiality and a shared commitment to the marine engineering field fostered by their institution. The evaluation panel was impressed by the level of communication and exchange with other countries and by the mobility of staff as indicated by the numbers of teachers participating in exchanges – both those leaving and arriving in Lithuania. The application procedure is available, and it is transparent. Opportunities for academic mobility are clearly given. The expert panel judged that the opportunities for improving competencies of teaching staff are very good.

The ratio of professors, associate professors, and lecturers with PhD among the teaching staff is relatively low. The expert panel recommends increasing it. Only 75% of the lecturers are certified at B2 or higher level in English. The expert panel recommends that all lecturers should be certified at B2 or higher. Further on, the research activities as well as the number of publications in international peer reviewed journals (Q1, Q2) should be increased substantially. The panel suggests that the teaching staff benefits from sabbaticals for research and teaching for a longer time period.

The infrastructure for teaching and learning, including auditorium, office and study spaces, library, computer rooms, software, electronic and digital resources, are excellent, adequate and up to date, but access ramps for students with disabilities should be provided. There is good access to international research results through the e-library.

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

Expert panel chairperson signature:

Prof. dr. Bettar O elMoctar