REGISTRUOTA
2023-12-15 Nr. SV4-105

CENTRE FOR QUALITY ASSESSMENT IN HIGHER EDUCATION

EVALUATION REPORT

STUDY FIELD OF MARINE TECHNOLOGIES (F04)

AT LITHUANIAN MARITIME ACADEMY

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Vilnius 2023

Report language – English

Study Field Data

Title of the study programme	**Marine Navigation**	**Maritime Transport Logistics Technologies**
State code	6531FX008	6531FX009
Type of studies	College	College
Cycle of studies	First cycle (undergraduate)	First cycle (undergraduate)
Mode of study and duration (in years)	Full time (4 years) Part time (till 6 years)	Full time (3 years)
Credit volume	240	180
Qualification degree and (or) professional qualification	Professional Bachelor degree in technology, qualification of Marine Navigator	Professional Bachelor degree in Management
Language of instruction	Lithuanian, English, Russian	Lithuanian, English, Russian
Minimum education required	Secondary education	Secondary education
Registration date of the study programme	29-08-2001	09-05-2012

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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 the 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 6, 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 Navigation study plans (full time, part time)
- Annex 1B. Study programme Maritime Transport Logistics Technologies study plans (full time)
- Annex 2A. Learning outcomes of the study programme Marine Navigation
- Annex 2B. Learning outcomes of the study programme Maritime Transport Logistics Technologies
- Annex 3. Examples of the study subjects description
- Annex 4. List of final thesis 2019-2022
- Annex 5. List of core teaching staff

1.4. Background of Marine Technologies 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 twelve members (two associate professors, three lectures, two students, one graduate, and four 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 a 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 Technologies 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 Technologies 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. It is accredited by the Lithuanian Transport Safety Administration (LTSA) and positively evaluated by the European Maritime Safety Agency (EMSA) in 2019.

The changing logistics technological environment of maritime freight transport and the increased number of new and modernised maritime commercial, military and coastal vessels resulted in the need to prepare maritime transport logistics technologies and ship crew management specialists. Thus, study programme Marine Navigation (SP MN) is focused on an officer working on board ships and Study programme Maritime Transport Logistics Technologies (SP T) is focused on a transport logistics specialist of the maritime sector working in shore-based companies.

The study programme Marine Navigation (SP MN) provides a state-regulated qualification that meets the requirements of national and international legislation governing the training of seafarers. The study outcomes are based on the requirements of STCW Subpart A-II/1 on minimum mandatory competency standards for navigational watchkeeping officers (operational level), A-II/2 for masters and chief mates (management level), A-IV/2 for GMDSS radio personnel. The content of SP MN subjects is in line with the approved IMO model course 7.03 Officer in Charge of a Navigational Watch. Students are awarded a professional bachelor's diploma and a qualification certificate of an Officer in Charge of a Navigational Watch on ships of 500 gross tonnage or more.

The content of SP T subjects is not strictly regulated, but the competences include the requirements of the ILO guidelines on training in the port sector, logistics and economic sciences necessary to any international logistics specialist. Students are awarded a Professional bachelor degree in management. SP T specialists get employed in Klaipėda port – port terminals, stevedoring, surveyors, freight forwarding, logistics, maritime supply, transport and/or logistics divisions of various companies, shipyards, the state institutions responsible for navigation and cargo transportation in the port, etc.

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 logistics professionals through higher education studies 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 Navigation and Maritime Transport Logistics Technologies meet the legal requirements for higher education study fields for first cycle college studies obtaining Professional bachelor degree in technology, qualification of Marine Navigator and Professional bachelor degree in management (SER Marine Technologies p. 2, 7).

The volume of one year of studies is 60 credits.

Marine Navigation is a 4 year full-time or a 6 year part time programme and equates to a total of 240 ECTS credits, of which 8 credits are allocated to the preparation of the final thesis (Annex 1A).

Maritime Transport Logistics Technologies is a 3 year full-time programme and equates to a total of 180 credits, of which 10 credits are allocated to the preparation of the final thesis. (SER Marine Technologies (Annex 1B)).

The 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" on page 3 states that "… a final thesis (project) or a final thesis (project) with final

exams (in cases established in field descriptors) shall be given: no less than 15 credits for university level studies, no less than 9 credits – for college level studies…" However, 8 credits are allocated to the preparation of the final thesis of the Marine Navigation study programme and 2 additional credits – for the final qualification exam (Annex 1A).

Table No.1. Marine Technologies program compliance to general requirements for first cycle study programmes of College level (professional bachelor)

Criteria	General legal requirements	In the Marine Navigation program	In the Maritime Transport Logistics program
Scope of the programme in ECTS	180, 210 or 240 ECTS	240 ECTS	180 ECTS
ECTS for the study field	No less than 120 ECTS	214 ECTS	165 ECTS
ECTS for studies specified by College or optional studies	No more than 120 ECTS	12 ECTS	30 ECTS
ECTS for internship	No less than 30 ECTS	72 ECTS	40 ECTS
ECTS for final thesis (project) with final qualification exam	No less than 9 ECTS	10 ECTS	10 ECTS
Practical training and other practice placements	No less than one third of the programme	54%	47%
Contact hours	No less than 20 % of learning	42%	49%

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.

Annexes 2A and 2B demonstrate the relevance of subjects to learning outcomes of study programme Marine Navigation and study programme Maritime transport logistics technologies. Annex 3 shows the coherence of evaluation methods of study programme objectives, expected learning outcomes of the study subject, study methods and student achievement assessment methods. The learning outcomes are divided into: 1) knowledge and understanding, 2) technological analysis, 3) technology design 4) research, 5) practical activity and 6) 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 3 Study subjects (modules) description). 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 etc. (Annex 3).

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

The study programmes Marine Navigation (SP MN) and Maritime Transport Logistics Technologies (SP T) subjects ensure students' consistent development of competences (Annexes 1A, 1B).

In the 1st year of SP MN, the basics of technological sciences are taught – Fundamentals of Marine Technology, Fundamentals of Seamanship, Ship Handling and Manoeuvring, Ship Structure, and Navigation and Positioning. The 2nd year provides the subjects necessary to acquire the competence of the operational level of the pilot qualification – Ship theory, Ship handling in various conditions, Human resources management, Seagoing professional practice. In the 3rd and 4th years, the Final seagoing professional practice is carried out and management level competence is acquired, the Final Qualifying Exam (FQE) is taken, and the Final Thesis (FT) is defended.

In the 1st semester of SP T, basic study modules Applied Mathematics, Logistics Information Technology, Introduction to Maritime Transport Logistics are taught to develop the basic concepts of mathematics, IT and maritime technology. Natural and engineering sciences are taught in the 2nd semester. The basics of technology applications and modelling are presented through Basic of mechatronics. In the 2nd year, they study Maritime Freight Logistics Technologies, Maritime Transport or Intermodal Transport Technologies (optionally), Maritime English, Warehousing and Inventory Logistics Technologies, Modelling of Global Supply Chains and can choose specific study subjects. In the 2nd year, research and technological analysis works are started, applying the analysis of scientific literature, performing laboratory tests. Students' research competences are further deepened in the 3rd year of studies in the Applied Technological Research and Project Management Methodology module. Practical skills are trained in the 2nd and 5th semesters by performing special tasks in the professional environment, carrying out port terminal operations.

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

Students have the opportunity to personalize the structure of the study programmes, taking into account personal learning goals and expected learning outcomes. Students can choose alternative or elective study subjects to deepen their knowledge in the chosen subject (Annexes 1A, 1B). But, the study subject has to be chosen by at least 6 students and they do it by means of a survey organized by the head of SP before the start of the semester. Students studying in English are encouraged to choose a study subject in Lithuanian, while those studying in Lithuanian can choose to study Russian or Spanish. Students' competences acquired through formal self-education or informal learning at work and self-education are recognized, which is carried out in accordance with the study regulations of the LMA. Studies are individualized through the recognition of ECTS credits for students participating in the Erasmus+ exchange program. The results of the studies are credited in accordance with the procedure established by the LMA for the crediting of the results of the partial studies. Well-performing part-time students who wish to study according to an individual study plan must file a motivated application to the Director of LMA. Upon consulting with the head of the SP, a list of study subjects (modules) is drawn up for them.

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

The final examination meets the requirements of the marine technology study field and the level of the first cycle of the studies. The procedures for the final examination are regulated in the LMA Study Regulations and The Description of the procedure for organising and conducting the Final Qualifying Exams (SER Marine Technologies p. 15). The heads of study programmes prepare requirements for FT, discuss them in meetings of the SP lecturers and submit them to the supervisory committee of the programme for approval. SP MN Studies are completed by defending FT and passing the Final Qualifying Exam (FQE). Students can defend FT and participate in the FQE if they have completed all compulsory courses SP MN or T. The final thesis is defended at the end of the last semester of study. If the FT is assessed negatively, a student may defend it again six months after the first defence. Students preparing their FT are introduced to the process of writing and defending FT, and the evaluation criteria. Students are required to attend seminars where they submit intermediate parts of FT for review. Such measures are part of plagiarism prevention. For the public defence of FT, a 5-member defence evaluation committee is formed on the proposal of the head of SP on behalf of the director, consisting of experts in the field of study – social partners, practitioners, academics. The person with the most practical and/or scientific experience in the field of study is appointed as the Chair of the Commission and the Head of SP is appointed as the Vice-

Chair of the Commission. Three members of the commission must come from another institution (researchers from social partners, universities or other higher education institutions). FT is defended in June (SP T) and in January and June (SP MN). Timetable for the FT defence is prepared by the study department after approval by the heads of the SPs and submitted to the defence commission at least two weeks before the first meeting of the commission. Prior to the defence of FT, the Commission shall be provided with the documents specified in the Director's Order on the Procedure for the Preparation and Defence of FT.

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 Navigation (SP MN) 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, art) activities implemented by the HEI for the field of research (art) related to the field of study

The Maritime Academy (LMA) has a large number of contracts with development, which are termed as R&D contracts, but are mostly of requalification character, but with a small number (0,1% share of number of contracts) of outsourced applied research contracts, monitoring studies and educational activity (SER, 49). The marine technologies field of study account for just above 40% of the R&D revenue. 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. 2a). However, no research projects have successfully been granted in the period, but two applications prepared without success (SER, Table 7).

Out of the six strategic indicators (SI) – on average over the evaluation period, two are meeting the SI (revenue from applied research, share of research publications per full time teacher), three are below the SI (publications by lecturers, number of research projects, number of publications in international databases), and one SI much above the SI (academic publications by students). For some SIs there are large variations per year (SER, Table 7, 50-51).

The number of publications shows an increasing trend after the downturn in the start of the pandemic. Both lecturer publications and co-publishing with students are in positive development, as documented by the list of publications. The publications are related to the field of study, with the majority related to the engineering field, but also in relation to educational science and interdisciplinary issues, which is a good basis for both development of subjects and study program (SER, 53-55). Both the SER and the site visit documented the constructive interest and effort from the faculty in developing their study subjects and the study programme both with respect to new insights in the engineering and technology domain, methodological approaches, as well as the ability to acknowledge and use interrelationships among study subjects.

Collaboration in applied research with domestic social partners and international academic partners are important both for lecturers and student applied research, and relevant examples are provided in the SER and also explained and shown in the lab tour under the site visit (SER, 56-57). International research collaboration is documented with researchers from other domestic and international universities (SER, 63). A special collaboration scheme with France and French institutions, including joint arrangement of a series of conferences secures joint development of studie field topics that have geographic contextual relevance for all partners (SER, Fig.4).

The applied research activities are planned as part of the strategic plan, and funding mechanisms are in place both from LMA special funds, where funding for publications, conferences and business trips are based upon historical scientific activity over a shorter and longer historical time period (SER, 58-61). It was also explained and shown during the site visit, how both Erasmus+ and Interreg projects had contributed to the mobility of lecturers and to the research facilities.

In the evaluation period, the Marine Technology field of study had a 42-44% share of the revenue from the LMAs R&D contracts, including four applied R&D studies, two monitoring studies, and one educational activity.

The LMA has a strong network of social partners and domestic and international academic partners, which have contributed to researcher mobility, research activity and dissemination activity – including meeting places through a series of conferences.

The LMA management and lecturers are aware of, positive and active with respect to strengthening the research activity and hence the link between science and studies at the academy. A new organisational unit, with specific responsibility for research and innovation, has been to develop this area of the academy. This is a development in its infancy, and the results of this have to be proved over time.

Strong strategic indicators can be found in student-lecturer co-publishing, which can become a potential leverage for the academy's science and research focus. The site visit supported this, showing good examples of research interest among both students and lecturers.

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

Literature used in courses are updated periodically, while study descriptions are updated annually, and approved every fourth year (SER, 65). The possibility for researcher mobility, the academic research network – including guest lectures, participation in applied research activity, and the availability of research publications through the library services, is a good basis for securing the lecturers basis for assessing the link between content of studies and the latest developments in science and technology.

For the students, the study plan covers a module of 'Methodology of applied research and projects in field of technology', preparing the students for applied research tasks and the final thesis (SER, annexes 1B.SO_T_ …). This will also make the students more aware of the updated body of knowledge that can be found in research publications, in addition to material provided in courses and lectures.

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. The international academic network is a good body for experience transfer and benchmark for their development within this area.

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 1B.SP_T_...). The module is given in the fifth 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 the field of study and applied research (SER, Annex 4).

Students are encouraged to prepare projects for research publication, supported by individual financial incentives (SER, 66). In addition to financial incentives, there is an academic scoring incentive, as the maximum score for the final thesis includes the dissemination of the research results through conference presentation or publication.

What is termed 'advanced students' are invited to participate in scientific activities and research projects together with teachers, which have also resulted in students receiving public prizes for and other financial incentives for their research activity. The site visit confirmed that students were well aware of the incentives for research participation (SER, 67).

The share of students that either prepared scientific publications and gave conference presentations, and those students that implemented applied research, was in the range from 1-6% and 0-3.5% respectively in the reporting period (SER, Table 10). During the site visit – in meeting with students, examples of students that had taken part in research and dissemination activities early in the study were presented.

The mechanisms for getting students involved in research activities are in place, but the share of students that participates are very low. The LMA should focus on how to bring more students into research and dissemination activity.

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.

As the presentation or publication of their final thesis in an research setting (conference/ scientific publication) is a formal assessment criterion, the students should not only be 'encouraged to prepare projects for research publications' early in the study, but it should be made mandatory for them to prepare for such in a learning and training session, hence be better prepared for their FT assessment.

Extending the focus the practice that advanced students are invited to participate in scientific and research projects together with teachers', one could ask if this could be brought into a group effort, so that the 'advanced students' can be used as leaders and motivators for other

students, then the 'advanced students' would also acquire leadership training 'on the job' (at school), while other students would learn from the approaches, attitudes and thoughts of the 'advanced students'.

Strengths and weaknesses of this evaluation area

Strengths:

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

Weaknesses:

1. N/A.

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 Navigation" and "Maritime Transport Logistics Technologies" 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 Navigation" study program was stable (42 students in 2019, 43 in 2020, 48 in 2021 and 42 in 2022). The "Maritime Transport Logistics Technologies" study program attracted a smaller number (11 students in 2019, 10 in 2020, 16 in 2021 and 8 students in 2022). Over four years the total number of students who signed the contracts were 220.

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. 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 students, as cleared during the site visit, seem very happy with their study programs and are seeking future work opportunities.

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, 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. Student 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 12 students were marine navigation and marine technologies.

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, organises 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 the 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 study 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 University has adapted the forms of studies to their needs. During studies, classic teaching methods are used: lecture, laboratory, exercises, seminars).

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. Additionally, more than 51% of self-education is allowed during the entire course of study.

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).

The study program is implemented using typical teaching methods (lectures, exercises, laboratory classes). The studies are carried out not only in accordance with national requirements for higher education, but also meet the requirements of The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW). Therefore, students are also people who want to improve their qualifications. Studies are carried out in the form of contact classes with a teacher. However, when there is such a need and students undergo internships on seagoing ships during the academic year, classes are conducted in a hybrid form (some students are in the lecture hall, and some observe and

participate in online classes). This form of study implementation allows all students to achieve the intended learning outcomes on an ongoing basis. A very modern teaching base is used to carry out the educational process. The laboratories are adapted to the specific profession that the graduates will perform.

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 such people. 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 in an unfavourable financial situation is presented.

Students requiring additional support may receive financial support. In addition, students can 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 time 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 confirmed. 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.

Conversations during meetings evaluation team in university conducted during the visit to the university confirmed that the university is not able to obtain full information on the employment of its graduates. This situation results from the fact that the labour market for graduates is international and therefore the Government Center for Strategic Analyses does not have complete information about graduates. It is necessary to establish an employment monitoring system for LAJM graduates in order to collect data on graduates working abroad, which is not collected by official agencies in Lithuania. According to the university, it has extensive contact with employers and receives bilateral information on students' preparation for work, e.g. after completing an internship. Employer 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 took part in the meeting, and only one of them confirmed that they had the opportunity to talk once about preparing students for work. It was after the end of students' professional practice. According to the evaluation team, communication with external stakeholders should be improved, including by creating an advisory body within the university structures that could share opinions about students and graduates. It will have a better 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 was 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 creating 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 is 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 procedure for submitting and considering appeals and complaints regarding the course of studies is described in great detail in university documents. The procedures performed well in one case reported in SER. However, due to the lack of a larger number of events, it is impossible to say whether the procedures presented are complete and will respond appropriately in each case.

Strengths and weaknesses of this evaluation area

Strengths:

1. N/A

Weaknesses:

1. It is proposed to consider the possibility of better formalizing employers' participation in the process of improving the study program, e.g. by establishing an Employers' Council;
2. The automatic anti-plagiarism system should be introduced.

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 panel was informed during the on-side visit that lecturers 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:

In total, 45 teachers teach in the marine technology study field, where 18 teachers form the core, including 6 doctors of science, 12 lecturers. The youngest teacher is 29, the oldest one is 71, with the average age of all teachers 50 years. The average length of work of the teachers of the study field is about 11 years.

The core of the teaching staff is consistently renewed by attracting practitioners with a maritime degree (master or chief mate) or scientific work experience who can teach in English. During 2019-2022, 4 new teachers began teaching in Lithuanian and English, and the core of the teachers increased from 14 to 18. The renewal of the core of the staff is related to the requirement for new lecturers to have at least B2 English language skills, have a scientific degree in the field of marine technology or transport engineering, a maritime degree and practical work experience in the maritime business. Another area that ensures the substitutability of teachers is the encouragement of graduates to study at the Master's level and their attraction to start teaching. From 2023 2 new 30-35 year old teachers will be accepted, they will replace the teachers, who finished their career in LMA. Experienced teachers working with new lecturers shared best practices, methodological material, etc.

The composition of the teaching staff meets and exceeds the requirements set for the composition of the teachers in the Descriptions of the requirements for the technology study field group and for Providing of General studies. Teachers with doctoral degree teach 42 cr. out of 165 81–100% of teachers have over 3 years of practical experience in the maritime transport and maritime business sector (minimum requirement 50%). In total, teachers practitioners make up 89% of all teachers in SP Marine Navigation and 86% in SP T.

As mentioned above the study programmes are taught in foreign languages by 45 teachers, of whom 32 or 71% have English B2, C1 or Marlins (Professional Maritime English) level certificates, other 13 teachers do not have a certificate. In January-April 2023, the English language courses for level B1 and B2 and testing took place at the LMA.

In addition, the STCW Convention establishes international qualification standards for the training of seafarers, therefore, SP Marine Navigation is taught by 7 teachers with the competency of ship master or chief mate of seagoing vessels.

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, 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. However, the ratio of professors, associate professors, and lecturers with PhD degrees among the teaching staff shall be increased. 71% of the lecturers are certified at the B2 or C1 level or the Marlins (Professional Maritime English) level in English. The expert panel recommends that all lecturers should be certified at the B2 or higher level.

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

The academy offers conditions for the development of academic mobility of teachers of marine technology study field. The International Relations Department is responsible for this activity and cooperates with the heads of the study programmes. In 2022, 87 agreements were concluded with foreign higher 37 education institutions, whose activities are related to the fields of studies of the Academy. Teachers can file applications twice a year in the autumn and spring semester to participate in teaching and learning mobility activities under the Erasmus+ program. In the fall and spring semesters, teachers can apply for participation in teaching and learning internships. The applications of all those, who wish to participate in the academic mobility programme, are satisfied by allocating the planned Erasmus+ funds. Common destinations of academic mobility: Latvian Maritime Academy, Liepaja Maritime College (Latvia), Ljubljana University (Slovenia), Le Havre and Normandy University (France), Romanian Naval Academy, Split University (Croatia), etc. Special attention is paid to teachers' English language learning abroad: 9 teachers of study field have improved their English language skills through intensive training in Spain, Cyprus and Malta.

International practical teachers' internships and one conference were held: The intensity of academic exchanges has been influenced by restrictions on mobility during the COVID-19 pandemic, so mobility over the last 3 study years has been low. Data of 2022 suggest that the mobility rate will be restored to pre-pandemic levels and the new contracts signed with universities of Poland, Germany and Czech Republic suggest that it can increase. Especially beneficial were 5 Erasmus+ strategic partnership projects of 3–5 higher maritime educational institutions from Poland, Romania, Bulgaria, France, Slovenia, Turkey, Portugal, Greece, Finland prepared and implemented in 2019-2022, during which new study methods are implemented in study process of navigation and logistics: SeaSafer, Prac-MarEng, Blue4Sea, SeaMentors, MarsNet, Mar-Lang and others. They include exchange of teachers, scientific conferences, publications, development of a

The academy offers favourable conditions for the development of academic mobility of teachers of the marine technology study field. The members of the evaluation panel were

persuaded by the evidence documented in the SER and during on-site meetings that this is a strategic priority.

The experts were impressed by the number of agreements finalised with foreign institutions of higher education, whose activities are related to the fields of studies of the Academy. Opportunities for academic mobility are clearly given. However, the number of outgoing teachers is low and shall be increased. The application procedure is available, and it is transparent.

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

Strategic Action Plan for 2021-2023 of the academy provides for the improvement and development of lecturers' professional, research, pedagogical and general (digital, 38 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. External and project funds (including Erasmus+), LMA state allocations for qualification improvement, earned funds are used for internships. The improvement of qualification is assessed individually during the teacher's certification, when drawing up and evaluating the annual plan for the implementation of both study programmes, and discussed during the meetings of the directorate and faculty. LMA staff are provided with an opportunity to participate in postgraduate studies (in 2023 two teachers going to study in transport engineering doctoral studies at VILNIUS TECH), they can take educational leave. In 2019, 20% of study field teachers improved their qualification, while in 2020-2022 – 40%. Internships abroad, contact and distance training in partner organizations or at LMA was held for development of various competences. In 2019, one teacher of staff went for internships abroad, in 2022 – 12. Since 2021, a promotional initiative was launched from the funds of LMA – teachers' internship on board seagoing ferries of AB DFDS Seaways, going to Karlshamn (Sweden) and Kiel (Germany). Eight marine technology study field teachers sailed to the sea on board a seagoing ferry.

The expert panel judged that the opportunities for improving competencies of teaching staff are very good. SER did not include data on the number of staff who took advantage of the training courses though. However, according to SER each teacher is obliged to improve his/her qualifications systematically. The panel suggests that the teaching staff benefits from sabbaticals for research and teaching for a longer time period.

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.

Weaknesses:

1. Low mobility of teaching staff.
2. Relatively small ratio of professors, associate professors, and lecturers with PhD among the teaching staff.
3. Relatively weak research and publication activities of teaching staff.
4. 71% of the lecturers are certified at B2 or C1 level or Marlins (Professional Maritime English) level in English. The expert panel recommends that all lecturers should be certified at B2 or higher.

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. LMA training building has 50 classrooms, of which 28 classrooms are dedicated for classroom work: one of 120-seat classroom, 6 – 60-seat classrooms, 20 – 30-seat, 1 – 15 seat classrooms, remote work studio, 5 IT laboratories (in total 68 computer work places), laboratory of marine Engineering, equipped with 3D printer and scanner. Virtual ship simulator classrooms are equipped with 2 multifunction navigation simulators of 6 and 12 bridges, 1 GMDSS training classroom of 12 work stations. The Seafarers Training Center has equipped Basic security laboratory, 3 special classrooms for computer based training (Seagull modules) training, 2 places for special training in fire fighting and life-saving at sea, and 1 classroom for training of junior officer commanders. For SP T training The seaport terminal operation simulator with 21 workstation (in the Cloud) and The maritime freight information systems simulator (in the Cloud). The distribution of LMA library funds by UDC study fields actually corresponds to student number FTE relative distribution in 2022. Electronic library resources ensure remote access outside the opening hours. Students with movement disorders can access LMA facilities (LMA Marine Technologies SER, p. 27). However, the on-site inspection has shown that the appropriate access ramps are not provided.

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 the study program.

The visit to the University confirmed that people responsible for implementing the quality system know their duties and procedures. Good knowledge of the procedures in force in the quality system allows you to respond appropriately to possible incidents. Frequent and

appropriate evaluation of the study program carried out in the process of internal quality of studies prevents undesirable situations from occurring. It is very good that the university has an ISO 9001:2015 quality management system. This allows for systematic verification and assessment of the quality of education in accordance with the procedures contained in the ISO quality management system procedures.

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.

During the visit to the University, the evaluation team confirmed that there is a Study Program Supervisory Committee (SPSC) at the University. The assumptions of the functioning of the SPSC, which includes internal and external stakeholders, are very good. However, employers' representatives rarely (periodically) have the opportunity to submit their comments on the study plan. This information appeared during 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. Unfortunately, only one person reported that they were able to share their thoughts about the study program once in the past. Therefore, the evaluation team suggests that the University consider 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 meeting with external stakeholders confirmed that the university provides proper education, but suggestions about study plans are rare. Moreover, information is provided in bilateral talks, and the Employers' Council could develop a synthetic position to assist the Program Committee in preparing changes to study programs.

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.

During a visit to the University, a team of auditors confirmed that the University had a survey system. The surveys are completed by students and graduates. The surveys are subjected to synthetic and detailed analysis. The survey results allow for the development of conclusions

that help improve the study process. However, the synthetic results of the surveys are not disseminated to the academic community. The audit team suggests placing them on the university's website along with information on corrective actions resulting from the surveys.

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 complete, in accordance with the Quality Book. The data obtained is processed by universities and their results are presented to interested groups.

There isn't 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. You just need 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 websites.

IV. RECOMMENDATIONS

Evaluation Area	Recommendations for the Evaluation Area (study cycle)
Intended and achieved learning outcomes and curriculum	1. 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 (art) and studies	2. 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. 3. 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. 4. 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. 5. The new research and innovation group should be given a specific responsibility for this.
Student admission and support	6. 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	7. To consider the possibility of better formalising employers' participation in the process of improving the study program, e.g. by establishing an Employers' Council; 8. The automatic anti-plagiarism system should be activated.
Teaching staff	9. The ratio of professors, associate professors, and lecturers with PhD degrees among the teaching staff should be increased. 71% of the lecturers are certified at the B2 or C1 level or at the Marlins (Professional Maritime English) level in English. The

	expert panel recommends that all lecturers should be certified at the B2 or higher level. The number of outgoing teachers is low and should be increased. The 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.
Learning facilities and resources	10. Continue to develop learning facilities and resources. 11. Improve conditions for students with special needs. Access ramps for students with disabilities should be provided.
Study quality management and public information	12. LMA should foster and develop cooperation with external stakeholders.

V. SUMMARY

In terms of the learning outcomes, 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 proves the appropriate focus of the objectives and learning outcomes. The objectives, learning outcomes, teaching/learning and assessment methods of the first cycle programmes are well 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. 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 final thesis meets the requirements of the study programme with the 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 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 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 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 academy offers favourable conditions for the development of academic mobility of teachers of the marine technology study field. The expert panel members were persuaded by the evidence documented in the SER and during on-site meetings that this is a strategic priority. Opportunities for academic mobility are clearly given. The application procedure is available, and it is transparent.

The ratio of professors, associate professors, and lecturers with PhD among the teaching staff shall be increased. Only 71% of the lecturers are certified at B2 or C1 level or Marlins (Professional Maritime English) level in English. The expert panel recommends that all lecturers should be certified at B2 or higher. The number of outgoing teachers is low and shall be increased.

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 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.

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